Book 02

PUBLIC HEALTH RESOURCE NETWORK

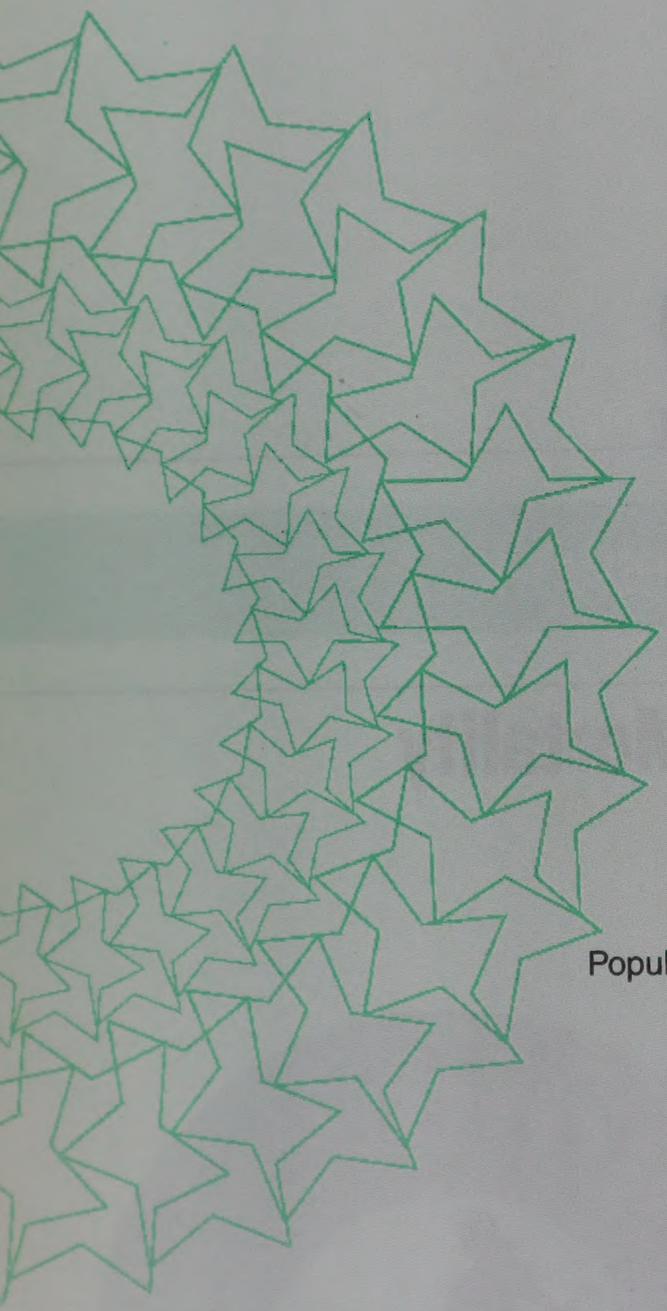
Reducing Maternal Mortality

NATIONAL RURAL HEALTH MISSION
राष्ट्रीय ग्रामीण स्वास्थ्य मिशन
(2005-2012)

Book 2

Public Health Resource Network

Reducing Maternal Mortality



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State Institute of Health and Family Welfare, Orissa
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Child in Need Institute
ICICI Centre for Child Health and Nutrition

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Preface

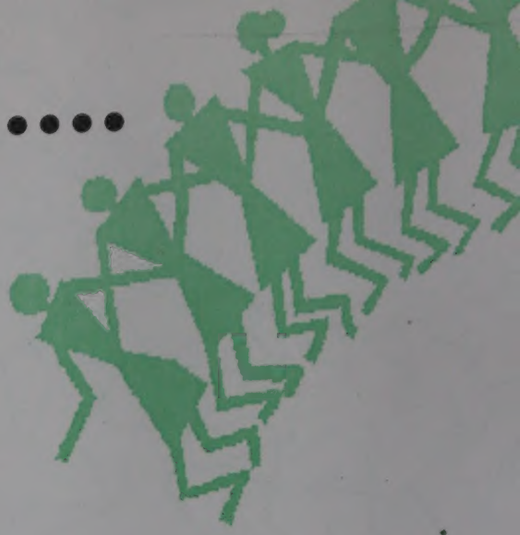
Public Health Resource Network

The National Rural Health Mission's vision of a national programme planned at the district level, and if possible at the village level, needs an exponential increase in capacities at all levels. The NRHM has itself initiated many steps in this direction. However, given the vastness and diversity of the country and the rigidities of the planning and implementing structures, one needs to supplement the official national mission led process with many varied, creative and massive endeavors from state governments, health resource centers, different professional sections and different sections of civil society.

This initiative- called the Public Health Resource Network (PHRN) aims to provide support to public health practitioners working in the districts in all aspects of district health planning and public health management. The central element of this initiative is a capacity building effort structured as a distance learning programme. This distance learning programme is not a substitute to formal professional public health training and it does not carry with it any guarantees of increased employment or career options. It is meant to support individuals and organizations both within and outside the health department who are committed to working for a more equitable and effective public health system. This programme complements official training and education programmes through an open-ended, more informal and immediate reaching out with information, tools and a diversity of programme options and perspectives.

The course faculty and editors of the modules are drawn up exclusively from those who have been active in various states in providing support to governments and non governmental organizations in health and related sectors. This programme itself is being organized primarily by a number of agencies already providing resource support to states on different aspects of NRHM programmes.

A mission needs missionaries, and it needs them where the challenges are greatest- in the remote and most underdeveloped areas of the northern and eastern states, and indeed in all the under-served areas of all the states. A Health Mission needs these missionaries to also be professionals, where being a professional is not one more



form of privilege- but a competence that anyone willing to put in the time and effort— and a little expense— can acquire!! Thus the contact programmes at district, regional and state level would evolve into mechanisms of sharing of resources, and building mutual solidarity amongst those who work for change , and of those who work in the health sector because they seek to work for the poor. The true test of the programme is thus not the number of certificates that we issue but the better quality of district plans, a higher motivation of district teams and eventually better health outcomes in the district. The immediate context is the National Rural Health Mission. But hopefully the voluntary network that emerges will contribute over the years to the evolution of a network of district and block level resource groups who provide technical support to all efforts at decentralized planning in governance and to all societal efforts towards an equitable and just society.

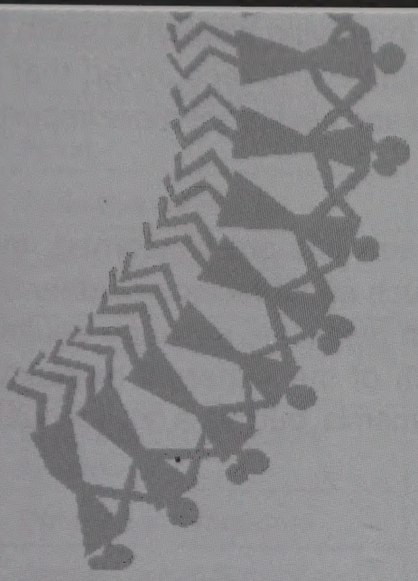
In this book, the second volume of the series, we discuss the programmes related to reduction of maternal mortality – perhaps the most central and refractory of all our public health goals. The first lesson places this programmatic goal in context and the second lesson discusses the problems of assessing maternal mortality. All the other lessons discuss what have been the main causes of maternal mortality, the key constraints that have come in the way of reducing it, and best practices from all over India that we can learn from.

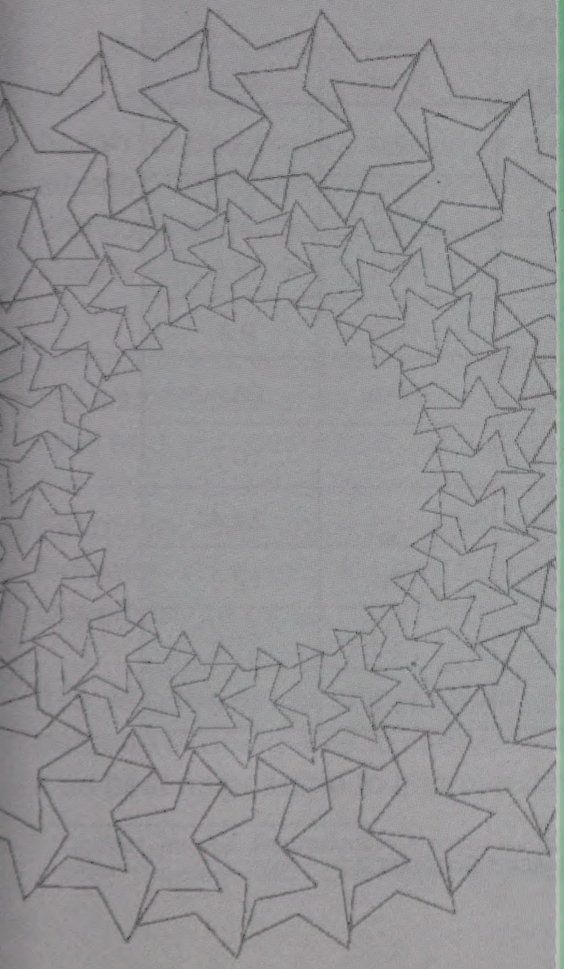
We plan to update and revise these books, based upon the feedback we receive from the districts. The PHRN looks forward, not only to your learning from these books, but to your participation in the creation of future editions.

Dr. T. Sundararaman
PHRN Programme Coordinator

Lesson ONE

Socio-Medical Determinants of Maternal Mortality





In this lesson we shall discuss:

- Maternal mortality in the context of women's health.
- The medical causes of maternal mortality
- The social determinants of high maternal morbidity rates.
- The main strategies that are known to be effective for reducing maternal mortality in the current socio –economic context.
- The importance of quality ante-natal care and ensuring skilled attendance at birth.

MATERNAL MORTALITY IN CONTEXT OF WOMEN'S HEALTH

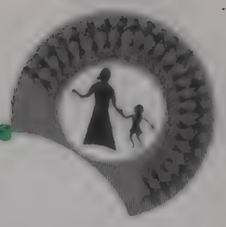
Women's health, as we know, is determined largely by the basic and severe socio economic inequalities that beset most women in our country. However the strategic thrust for improving women's health has been focussed on the provision of services related to reproductive health. It is recognized that the facilitation of basic needs and rights like the right to food, water, livelihoods and assets are more important than any action undertaken by the health sector in isolation.

It is well known that even as far as mortality and provision of health services are concerned, more women in the reproductive age group die of communicable diseases such as tuberculosis rather than maternity related causes. Though there are programmes for many such diseases, ensuring equitable access to women for such problems remains a challenge. Also much of the maternal mortality is compounded by other diseases like malaria or underlying malnutrition and anemia, but this is not adequately acknowledged.

Prevalence rate (per 100,000 rural women) of main causes of female death in reproductive ages, 1994[1]

Causes of female deaths	Age Group (years)					
	15-19	20-24	25-29	30-34	35-39	40-44
Tuberculosis of lung	46.9	31.2	49.1	42.0	62.0	53.8
Suicide	87.0	46.3	27.7	25.5	13.4	3.5
Heart attack	28.5	22.9	29.7	20.3	42.2	12.6
Burns	33.7	38.5	30.9	21.1	18.0	9.9
Cancer	14.9	10.7	13.4	9.9	21.0	28.9
Anemia	18.5	18.7	16.1	16.5	15.3	10.7
Bronchitis and asthma	10.0	13.1	9.03	9.7	22.4	31.4
Malaria	41.9	16.3	8.37	12.0	16.1	12.6
Gastro enteritis	15.2	20.9	10.3	7.2	16.1	21.5
Acute abdomen	25.1	10.4	19.3	9.0	11.7	10.7

[1] Ramanakumar AV. Reviewing disease burden among rural Indian women. *Online J Health Allied Scs.*2004;2:1



Deaths Among Females In India By Major Causes, As Percent Of Total Female Deaths 1982-93 [2]

Major Causes	1982	1983	1984	1985	1986	1988	1989	1990	1991	1992	1993
Accidents and injuries	4.4	4.6	4.9	5.1	6.0	5.5	6.4	7.5	7.7	7.1	6.82
Child birth and pregnancy	2.4	2.6	2.2	2.7	2.1	1.8	2.1	2.3	2.5	2.4	2.93
Fever	10.4	10.8	10.7	9.9	11.0	8.8	8.2	8.2	7.9	8.5	7.35
Digestive disorders	7.4	7.8	7.8	7.6	7.7	6.8	6.9	6.8	6.7	6.9	7.22
Cough (disorders of respiratory system)	17.2	18.0	18.2	18.8	17.6	18.6	18.3	16.3	16.3	17.2	16.15
Disorders of central nervous system	3.5	4.5	3.9	3.9	3.9	4.6	4.6	4.3	4.4	4.3	4.25
Diseases of circulatory system	7.4	8.5	9.1	9.1	8.3	8.4	9.8	9.7	9.8	9.3	9.67
Other clear symptoms	8.2	7.4	7.6	8.8	8.8	8.7	8.0	8.0	7.9	7.9	8.26
Causes peculiar to infancy	12.4	11.2	10.8	10.7	10.2	10.1	9.8	9.9	10.7	10.2	11.74
Sanility	24.8	24.2	24.2	23.4	24.4	26.1	26.0	27.1	26.1	26.2	25.61

Source: Survey of Causes of Death, Annual Reports.

The challenge of the serious practitioner and advocate of women's health is to plan for reproductive health as one part of the larger spectrum of issues related to the health of women.., which in itself, is situated within the context of even larger socio economic discriminations due to gender. These myriad and complex issues of and underlying the health of women will be discussed in a separate book; Women's Health –II.

Nevertheless, reproductive health and the problems they face during pregnancy, delivery and childcare are a significant issue for most women. The maternal morbidity rate is over 30 times the maternal mortality ratio and all measures to decrease maternal mortality also contribute to decreasing maternal morbidity. It is also a fact that the maternal mortality ratio, despite its difficulties and inaccuracies (see Lesson 2: Estimating MMRs) remains the main index for women's health in use today and is considered a proxy indicator especially for the quality, availability and accessibility of services - even in the Millennium Development Goals.

It is with this understanding and in this context that maternal mortality needs to be studied with the purpose of being able to intervene in the basic strategic thrust being followed, as well as in order to use it as best as possible to improve the general situation of health and health care facilities for women.

[2] Qadeer, Imrana: Reproductive Health: A Public Health Perspective. Economic and Political Weekly. Oct 10, 1998. 33(41).p.2675-2684. Location: SNDT Churchgate. **Reproductive Health: A Public Health Perspective**

ADDRESSING MATERNAL MORTALITY: AN INTRODUCTION

Maternal Mortality in India is high and has remained high over the decades. In 1983, soon after India had signed the Alma Ata Declaration for Health for All by 2000, it adopted a National Health Policy. One of the goals of the action plan flowing out of this policy was to reach a maternal mortality ratio (MMR) of less than 100 maternal deaths per 100,000 live births by the year 2000. However in the year 2005 our MMR remains officially at about 400 – and the goal of below 100 has shifted to the year 2015.
Such a persistent high rate means that there continue to be almost 1 lakh preventable maternal deaths and, closely related to maternal complication, about 3 million infant deaths every year. Moreover, over 30 lakh women also suffer from non- fatal complications related to pregnancy and child birth annually. The reduction in maternal mortality is also, therefore, simultaneously a reduction in neonatal mortality (and therefore child mortality) and in maternal morbidity.

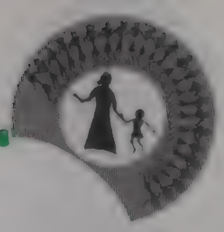
High maternal mortalities may be described as occurring due to a number of medical reasons. But if we see the figure disaggregated for caste, education and socio –economic status the rates are so much higher for scheduled castes and tribes, for less educated families and for poorer families, that it is obvious that social determinants are as important as the medical determinants. We also note that the rates even in the middle income groups as well as in other caste groups and more educated sections are still far too high to be acceptable for this stage of development.

MEDICAL CAUSES OF MATERNAL MORTALITY

1. The most common cause of maternal mortality is **bleeding**- before, during or after child birth. This may account for almost 25% of all deaths. By nature, such bleeding is sudden in the onset, rapid and largely unpredictable, leading to death within an hour or two if it is not controlled with drugs and massage of the uterus to stimulate contractions. Blood transfusion is usually required and life saving surgery may be needed despite other control measures. Travel time to reach a place where such care can be given and the availability of a place that has these services and can be reached are thus the most critical factors irrespective of other medical determinants.

   It must be recognized that loss of blood is much more rapidly fatal in a woman with anemia. Anemia is extremely common amongst pregnant women in India and relates largely to nutritional deficiencies, hook worm disease and the ineffectiveness of current programmes centered around the distribution of iron tablets as a part of antenatal care to address this problem.

2. **Sepsis** – or infections during the process of child birth, accounts for some 15% of deaths. Clean delivery helps prevent this and even in situations of little skill availability by training birth attendants, one can ensure increased cleanliness. If sepsis develops, it is only good post-partum (i.e. after child birth) care that helps diagnose this early and treat it with antibiotics adequately.



3. **Hypertensive** disorders of pregnancy account for 12% of maternal deaths. Good quality of ante-natal care including routine measurements of blood pressure picks this problem up early when it is relatively easy to treat without affecting mother or child. Untreated at this stage, the woman may develop fits (eclampsia) which is life threatening to mother and child unless prompt skilled medical care and appropriate drugs (especially magnesium sulfate) are available. In some cases surgery may also be required.

4. **Prolonged or Obstructed Labour** accounts for about 8% of deaths and is due to unsafe abortions. This is much more in some states where there is less access to safe services for medical termination of pregnancy (MTP).

5. Another large number of deaths (about 20%) are due to exacerbation of medical ailments occurring during pregnancy when the body's resistance is diminished. **Anemia**, is one of the most frequent and most preventable of such medical causes. Other causes are malaria in the high endemic areas, hepatitis, heart disease and potentially HIV infections too.

Pregnancies that are more likely to face complications and end up as deaths are termed ***high risk***. For example first pregnancies are more likely to face complications; short women are more likely to have obstructed labour; underweight and undernourished women are more likely to have many of the above complications. However though these correlations exist, the number of women who apparently do not have any such risk factors but who still develop complications at child birth is so high that the advice now is to treat all child-births as being potentially risky. Thus when we estimate the requirement of services, a good thumb-rule is:

15 out of every 100 pregnancies are likely to face a complication requiring skilled assistance,

5 out of every 100 pregnancies would ideally need surgery (cesarean section surgery).

> Thus, in a population of 100,000 there are likely to be 3000 pregnancies in a year, of which 450 would have complications and 150 would require surgery and we cannot truly predict which of the 450 or 150 they would be. Thus, unless all 3000 are able to access skilled care, **about 150 would be dying every year.**

THE SOCIAL DETERMINANTS

The impact of medical factors is considerably altered by the role of social determinants. We discuss below a number of social determinants of maternal mortality, each one of which makes death from one or other of the above medical reasons more likely:

1. **Poverty:** Resulting in poor nutrition, increased burden of work and decreased access to essential health services. This is often due to fewer services being available. Thus for example, in a district, if the district hospital is the only place available to treat high blood pressure in pregnancy, many women who stay far away and are detected with this complication may not travel so far to seek treatment or may postpone going until fits start.

   This should not be wrongly interpreted as lack of awareness – though there is some element of truth as well. Poorer access of health services for the under privileged is also due to the inability to pay for it. Even so called free services carry costs – like the cost of travel, food during hospitalization and costs of the escorting person. Many families do no access services because the woman and/or her husband have to go to work – and if they do not earn on a day when there is a need for their labour they would have to starve!!! Even if they get to such a service, they are likely to encounter a host of problems ranging from insulting behaviour, to doctors being absent from duty. Higher poverty levels also co-relate with poorer educational levels which, in turn, inhibit the use of services and information.

2. **Marginalisation (of tribal and dalit communities, migrant women, women-headed households etc):** This refers to exclusion due to various forms of social discrimination. Sometimes the discrimination is evident – for instance, dalit children may not be able to come to an anganwadi center in the upper caste area, or an upper caste ANM may be reluctant to go to a tribal hamlet. But discrimination may be more subtle, like a hospital employee using derogatory language with a tribal or dalit, or not examining her/him properly or understanding their language and practices.

   Often this discrimination is legitimized by many complex reasons. For example, the ANM may complain that the dalit area has less readiness and willingness to accept such services. She does not realise that when she encounters this reluctance in other communities she perceives it as an individual's problem and actively overcomes it, but when it occurs in a dalit family she attributes it to their being part of a particular community and does not take an active role in changing their behaviour. Further, since the ANM does not belong to their community, and given the dalits' experience with the local elite, they may be less willing to trust her even if the ANM is willing.

   Other than caste, class and tribal status there are other forms of marginalization. Handicapped women face active discrimination both within and outside the family. Migrant women may not even be registered either at source or at destination by the health services which often use proof-of-residence as a criterion. Maternity entitlements supporting her nutrition and rest from work are almost nil for over 95% of women in the country who work in the Informal Sector.

Households, where there is no earning male and the pregnant woman is the only or even the main wage earner, are likely to face more problems in accessing care and coping with wage loss, in ensuring rest, reduced burden of work and more food for themselves. All of these families require a high degree of affirmative action - positive discrimination in their favor – to offset the discrimination they are facing. Building such affirmative action is one of the challenges of public health policy.

3. **Early Age of Marriage:** In many communities early marriage is still the norm. Marriage before the age of 18 carries a much higher likelihood of maternal mortality. This ought to be recognized as another form of marginalization and affirmative action is needed to help these young girls who become pregnant soon after. Unfortunately they even face state discrimination in that legally they are denied maternity benefits and even registration of births.

4. **Early First Pregnancy, Decreased Spacing Interval And Large Family Size:** Maternal mortality is higher in women below 18 years of age, with less than a three-year gap between pregnancies and in women facing their fourth or higher order pregnancy. All three of these factors are related to patriarchy and the lack of control women may exert over their own bodies. Thus women have no choice in when to get married and who to get married to. They are unlikely to be consulted about sexual practices and are not in a position to insist on contraception and safe sexual practices. They are not allowed to decide when they would like to bear children and how many they would like to bear.

   The evidence from all over India is that given the choice women do not want to marry early, would prefer to wait till well after 19 years before they have a child, do not want to bear children too close to each other and certainly do not want to have more than three children. The reasons for their choices are simple and governed by the difficulties they face in combining child care with their other tasks. However prevailing patriarchal norms acting through the husband and other family members inform the final decision on all these matters. The only decision in which she may actively acquiesce is the desire for at least one son- but even this is because of the status and sense of protection that it affords her in a society governed by patriarchal norms. The long term solutions to these problems require challenging patriarchal norms through social movements and women's movements while simultaneously empowering the women with the information, skills and confidence needed to exercise their choice.

5. **Poor Educational Levels:** Educational levels, especially that of women are closely related to maternal and child mortality levels. This is not only due to better knowledge acquisition but also an altered health seeking behavior that comes with higher educational levels.

6. **Poor Access to transport at time of need:** The level of access to transport depends on the development of roads and public transport. In many areas with poor economic development and poor development of infrastructure the lack of such access contributes to maternal mortality significantly. The poor and marginalized sections would be affected more but all sections share some part of the distress due to this.

7. **Poor Access to health facilities and health services:** Health facility development is uneven. There are many areas where public services are deficient or completely unavailable. In such areas, typically, private sector services are also deficient. This too contributes to maternal mortality rates.

How does one prevent these deaths?

In today's context there are eight essential strategies to preventing it

1. ***Community Support to a Pregnant Woman*:** Every pregnant woman, in today's context of deprivation and discrimination, needs to be supported at the community level by a trained volunteer- it could be the anganwadi worker or the ASHA or any other equivalent volunteer. This helps to ensure that she is able to get the food and the rest and support that she needs from the family. This support also helps her access good quality ante-natal care and assistance at child birth that by herself she may be unable to do. (See section on ASHA and maternal health).

   Another aspect where support is essential is in *planning for every birth.* A plan has to be made by the ASHA and the family together for what to do when the expected date of delivery nears and when labor pains start. If they are willing to go for an institutional delivery, the family plans for how to get transport organized. If the child-birth is planned at home than ensuring that an ANM attends the delivery is the most important priority. And if even this cannot be ensured, then assistance is needed for securing the next best option and ensuring basic hygiene (the five cleans).

2. ***Access to Quality Ante-Natal Care:*** Not only must antenatal care reach every pregnant woman but it must be of good quality. (we may term this 8/8 quality care– representing the *8 components of good quality care*- early registration, weight record, abdominal examination, iron and folic acid tablets, tetanus immunisation, blood test, urine test and above all blood pressure measurement!). Most of the elements of antenatal care that have impact on

8 components of good quality care:
- early registration
- weight record
- abdominal examination
- iron and folic acid tablets
- tetanus immunisation
- blood test
- urine test
- blood pressure measurement

reducing maternal mortality, like blood pressure measurement or timely referral, are the quality dimensions that are missing even where antenatal care is reported as 100%. Universal quality ante-natal care to all women, especially reaching the most marginalized sections needs good coordination between ANM, AWW and ASHA and the pregnant women.

3. ***Access to Skilled Birth Attendant:*** In many places, the number of nurses and midwives available in the region would need to increase to ensure that universal access is achieved. Even where they are available, every nurse and midwife needs periodic refresher training and skill upgradation to ensure that she can manage a number of complications of child-birth. She also needs to be able to recognize serious problems early, and initiate treatment for these complications before a prompt referral. Problems of access also occur due to motivational factors, health seeking behaviour and many other reasons that are dealt with in another section.

4. ***Working 24 hour Institutional Delivery Facilities*:** The experience from many places is that the best way of ensuring that a pregnant woman gets adequate quality skilled assistance at child birth is by ensuring that she comes to an institution equipped to provide skilled assistance at delivery. For the public health system it means ensuring that every PHC and CHC provides 24 hours services with nurse and midwives present and of course the drugs and equipment and the rooms needed to achieve this goal. The availability of a trained medical officer to support this staff is desirable but not essential for reaching the definition of institutional delivery. Skilled assistance provided in the sub-center would qualify only if it has the technical competence of what can be made available in the PHC – or what is otherwise known as basic emergency obstetric care.

5. ***An Emergency Obstetric Care unit for every 1 lakh population.*** The other major requirement to save lives is that every CHC has a doctor who is able to manage complicated child-births. This has two levels- one is a level of complications which can be managed with some skills, appropriate drugs and a few procedures that can be done with minimum facilities by a trained medical officer or even a nurse. This is called Basic Emergency Obstetric Care (BEmOC). The other is the level that requires surgery and blood transfusions. This is denoted as comprehensive emergency obstetric care (CEmOC) and a hospital that provides it is called a first referral unit (FRU). Every district hospital and every CHC must be an FRU and be able to provide the CEmOC level service. All these FRU hospitals should also be able to provide safe abortion services and provide care for reproductive tract infections and, in fact, attend to all women's health needs – not only the obstetric ones. The provision of safe abortion services is another key element of lowering maternal mortality and it goes along with the creation of FRUs. The problems in establishing these emergency care centers are given in the next lesson.

6. ***Referral Transport System*:** Linking all villages and functionaries to the CHC or district hospital by an ambulance (or other referral transport arrangements) for transporting the mother facing complications in time, would also save numerous lives.

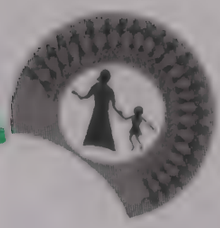
7. ***Affirmative Action to reach vulnerable families:*** Noting that there are many families where due to reasons of poverty or marginalization, access to basic maternal health care services becomes more difficult than for others, the government and panchayat needs to organize special measures to compensate for this inequality. The **Janini Suraksha Yojana** is one such important scheme that provides maternity benefits to women below the poverty line. But this may not be adequate and as we noted earlier there are other types of marginalization as well.

8. ***Women's Organisation and Women's Rights*:** At each hamlet there should be a women's group which is constantly urging not only the women but also all the men to work towards equal rights for women and equal access to food, education and access to health care. This should be a concern not only when she is pregnant but at all times. This group may be a pre-existing group like a self help group or a women's health committee organized for this purpose. It should be supported by the panchayat. Organizing and facilitating such a group is another major role for the ASHA.

IN CONCLUSION

Putting these eight steps together in today's context can be a challenge- but clearly this is the challenge that the district level plan has to adequately address.

Of these 8 interventions for reduction in maternal mortality the single greatest and most immediate one is to provide access to skilled assistance at every birth – but if we study the list carefully and reflect on it we would recognize that everyone of the 8 components are inter-related and the figures for skilled assistance at birth will improve maximally only when all 8 dimensions are addressed together.



Review Questions:

1. List the eight vital components of antenatal care.
2. Recollect the Social Determinants of Maternal Mortality given above? How does each social determinant relate to each medical determinant? Make a flow diagram to show these linkages and relationships.
3. You are working with a population of 2,50,000. How many women would need ANC? How many would be likely to suffer complications during pregnancy? How many are likely to require caeserian section?
4. What is the difference between BEmOC and CEmOC ? What facilities must a FRU provide?
5. how can maternal deaths be prevented? List the possible interventions in the order of importance in your area.

Application questions:

1. Discuss in detail how the concept of 'reproductive health' has affected public health policies related to women. Illustrate with examples.
2. When you ask women in your area what their health problems are, what are the issues that come up most frequently? Why? How is 'health' generally understood by women? How does this understanding affect their articulation of needs and demands?
3. Do you have personal experience of a successful prevention of maternal mortality? If so, describe.

Project assignment

1. What is the status of each of the above social determinants as applicable to your district?

   For example

   The average age of marriage in _____ district is _____.

   The number of girls who were married last year below the age of 18 is ____.

   Where would you look for the above data?

   If you do not get the exact figures, or want to cross-check these figures, how can you estimate the extent of the problem from simple rapid appraisal methods? From well designed population studies?

2. What are most commonly encountered medical complications in the district hospital / FRU? How many patients came for normal delivery and needed surgery or other procedure due to complications? How many were referred while in labour because they needed surgery or had other complications that needed medical treatment?

3. In your opinion, what is the single most important operational intervention required to bring down MMR in your geographical area? Justify with facts based on field data, secondary data.

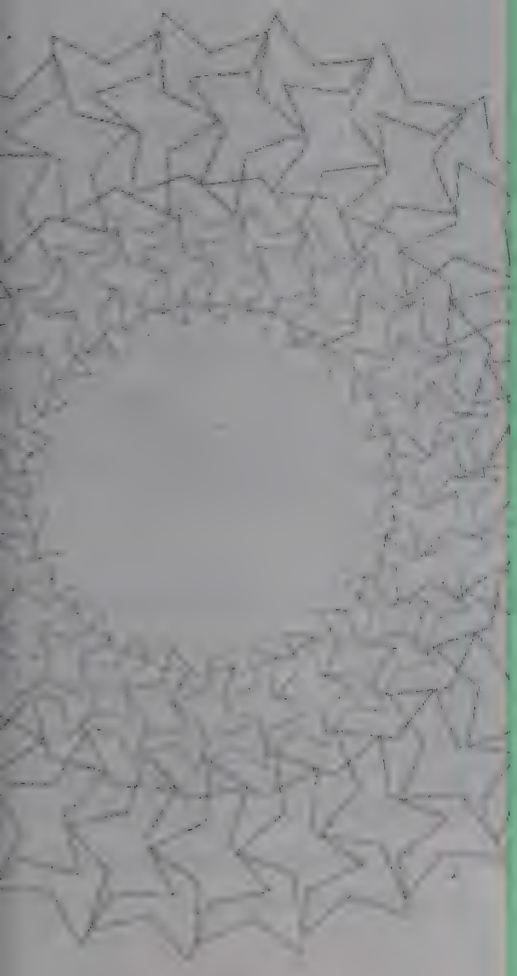
NOTES

Lesson TWO

Statistical Issues: Estimating MMR

In this lesson we shall discuss:

- The definition of MMR
- The data sources from which MMR is available today and their limitations.
- The indirect measures of MMR measurement.
- The justification for using surrogate/proxy indicators.



INTRODUCTION:

Very often programme managers are under pressure to quote a figure regarding "MMR," the maternal mortality ratio for a given district or state. Coping with this request leads to the postulation of some figure the validity of which is a mystery- except that the source is considered "authoritative". It is a good habit to be always cautious about authority!!! So let us see how these figures are arrived at and what we can do about it.

THE MATERNAL MORTALITY RATIO DEFINITION:

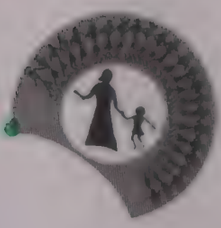
The maternal mortality *ratio* (MMR) is defined as the number of maternal deaths during pregnancy or within 42 days after the termination of pregnancy per 100,000 live births during a year. Accidental deaths are excluded. It is calculated as the number of maternal deaths during a given year per 100,000 live births during the same period – and is hence strictly speaking a ratio. (The term maternal mortality *rate* is to be reserved for maternal deaths per 100,000 women in the reproductive age group – a rarely used statistic best left alone!!)

USUAL SOURCES OF DATA:

Since maternal deaths are relatively infrequent occurrences, a very large sample size is required to give an MMR estimate with any degree of confidence. Most of these sample surveys are much smaller than the size required- at best they give a state level estimate – not district level estimates.

The most often cited source is the National Family Health Survey of year 1992-93 (NFHS –I) and the year 1998-99 (NFHS- 2). The sample size of NFHS was 90,000 households and this was barely adequate even for a national estimate. Its state level estimates were even more unreliable. The limitation of even its national estimate is made clear by comparing the two NFHS estimates. Thus in NFHS -1 it reported a maternal mortality ratio of 437 in NFHS -1 for the two years preceding the survey, and in NFHS -2 it reported an MMR of 520, but they could not confirm whether this represented a real increase in MMR or just a "not significant" statistical variation.

Maternal mortality rate is currently not available from the routine demographic sources like Census, National Sample Survey (NSS) and the Sample Registration System (SRS). The Registrar General of India (RGI) registers all deaths and births and this should give us an estimate. The caution is that birth and death registration in India still remains very incomplete and this is more so in states where higher mortality is expected. Thus the routine death report analysis of the RGI office is not useful for this. The RGI office also conducts the Sample Registration System which is much more accurate for birth and death registration. In two years, 1997 and 1998, the RGI office did come up with SRS based estimates which at the national level were plausible but its state estimates were considered unreliable. This was not persisted with.



In 2006, SRS has come out with a report entitled Maternal Mortality In India: 1997-2003;Trends, Causes And Risk Factors. This is useful data, though it comes after a large time gap. This is given below:

Table 3: Live Births, Maternal Deaths, Maternal Mortality Ratio in India by State from

India & Major States	Sample Female Population	Live Births	Maternal Deaths	MMR	95% CI*	Maternal Mortality Rate	Lifetime risk
INDIA TOTAL	**5 039 583**	**459 631**	**1383**	**301**	**(285-317)**	**27.4**	**1.0%**
Assam	202 943	19 619	96	490	(393-588)	47.4	1.6%
Bihar/Jharkhand	321 721	42 112	156	371	(313-430)	48.6	1.7%
Madhya Pradesh/ Chhattisgarh	220 269	27 563	104	379	(306-452)	47.4	1.6%
Orissa	254 176	20 914	75	358	(277-439)	29.5	1.0%
Rajasthan	248 891	31 371	140	445	(371-519)	56.1	1.9%
Uttar Pradesh/Uttaranchal	462 547	62 659	324	517	(461-573)	70.0	2.4%
EAG AND ASSAM SUBTOTAL	**1 710 547**	**204 238**	**895**	**438**	**(410-467)**	**52.4**	**1.8%**
Andhra Pradesh	251 511	19 152	37	195	(132-257)	14.8	0.5%
Karnataka	299 571	24 875	57	228	(169-287)	18.9	0.7%
Kerala	274 990	16 448	18	110	(59-161)	6.6	0.2%
Tamil Nadu	298 726	19 689	26	134	(83-185)	8.8	0.3%
SOUTH SUBTOTAL	**1 124 798**	**80 164**	**139**	**173**	**(144-202)**	**12.3**	**0.4%**
Gujarat	219 783	21 220	37	172	(116-228)	16.6	0.6%
Haryana	163 710	17 075	28	162	(102-223)	16.9	0.6%
Maharashtra	266 750	20 982	31	149	(97-201)	11.7	0.4%
Punjab	142 595	11 090	20	178	(100-257)	13.8	0.5%
West Bengal	390 702	29 972	58	194	(144-243)	14.8	0.5%
Other	1020 698	74 890	176	235	(200-269)	17.2	0.6%
OTHER SUBTOTAL	**2 204 238**	**175 229**	**349**	**199**	**(178-220)**	**15.8**	**0.6%**

Source: SRS, Maternal Mortality in India, Trends, 1997 -2003, Causes and Risk Factors, RegistrarGeneral of India, New Delhi

* Confidence Interval

ESTIMATING BY PROXY INDICATORS AND OTHER METHODS:

So what is to be done? One option is to get a large size maternal mortality study done. This requires a very large sample and would be very costly and impractical. The other is to try to arrive at it from death registration figures or from sub-center reports. Unfortunately these reports are often very incomplete and tend to grossly under report maternal deaths.

One possible approach has been called the sisterhood method.[1] : This method makes use of the data collected from female respondents in a sample survey on the number of ever-married sisters they had, the number who were not currently alive and the number who died while pregnant, during childbirth or within six weeks after delivery. This procedure cuts down the required sample size drastically because women generally have several sisters who could have been exposed to the risk of maternal mortality each time they were pregnant. The Human Development Profile Survey (HDPS) conducted by the National Council of Applied Economic Research in 1994 was the first national survey in India to attempt this. (Shariff, 1999). This survey covered about 33,000 rural households spread over 1,765 villages and 195 districts in 16 major states of India. As the relevant data have been collected from about 37,000 ever-married women, it is possible to derive (from the survey data) reasonably stable estimates of maternal morality for geographical regions and by socio-economic characteristics. The study showed a MMR of 544. The catch is that the data gives us the MMR for the period 12 years before the survey. None of our planning exercises would be able to use or plan for such large time gaps. It however remains the only data which shows MMR differentials across socio economic groups and this is presented below.

One other way in which these estimates may be made is to use proxy indicators. Based on the relationship between the maternal mortality rate and the proxy indicator as expressed by a regression equation, the MMR is estimated.

In the year 2002 Bhat et al published a set of estimates based on proxy indicators drawn from the Sample Registration System.[2]

The two proxy indicators in use in combination are skilled assistance at birth (safe delivery) and couple protection rate. The IIHFW study (Indian Institute of Health and Family Welfare, Hyderabad) showed that it would be acceptable to use only one indicator. This is based on the postulation that the relationship between skilled assistance and maternal mortality is adequate to estimate the MMR.

Source

1 Levels and Differentials in Maternal Mortality in Rural India: New Evidence from Sisterhood Data P.N. Mari Bhat, National Council of Applied Economic Research, March 2002

2 Maternal Mortality in India: An Update. Studies in Family Planning, 2002.

The equation for this is as follows:

Ln (MMR) = 3.845 – 0.721 Ln (Safe deliveries)

Estimates of MMR for India and its major states using this formula and the percentage of safe deliveries values in 1992-93 (NFHS-1) and 1998-99 (NFHS-2) give us the following estimates for MMR as shown in table 1[3].

Table 1: Estimates of MMR for 15 major States of India

(Based on estimation of proxy indicators from NFHS 1998-99 and Registrar General of India -1998)

Sl.No	State	1998-99 From NFHS by estimation (Source: see below)	1998From RGI Source: NRHM newsletter (pg 19. vol 1 no 2)
1	Andhra Pradesh	341	159
2	Assam	762	409
3	Bihar	714	452
4	Gujarat	393	28
5	Haryana	468	103
6	Karnataka	364	195
7	Kerala	262	198
8	Madhya Pradesh	601	498
9	Maharashtra	365	135
10	Orissa	552	367
11	Punjab	351	199
12	Rajasthan	526	670
13	Tamil Nadu	284	79
14	Uttar Pradesh	737	707
15	West Bengal	451	266
	INDIA	**466**	**407**

[3] Source: IIHFW, Annual Report 2002-03, Pg. No. 58-62

The advantage of this estimation of MMR from the safe deliveries percentage using the formula given above is that we can get MMR estimates for district level which we cannot get from any other approach.

The alternative is that we can directly use the skilled deliveries figure and try to maximize skilled deliveries without becoming unduly bothered with the lack of a MMR figure to set out goal posts!! That is what we would recommend.

> **Moral**: Do not set goals for MMR- because it cannot be measured reliably at the district level. Setting goals for skilled assistance at births is as useful and much more reliable as an indicator!!! But do keep track of maternal deaths and investigate all deaths through Verbal Autopsy if possible.

Corollary Moral : Look askance at people who set district level MMR targets or even state MMR targets!!!

Note: The figure derived from the regression equation is not a substitute for a well done survey or complete registration of deaths. Maternal Mortality is caused by multiple factors and the conditions under which this equation was derived change with time and circumstance.

THE MILLENIUM DEVELOPMENT GOAL INDICATORS:

We also need to note that the Millenium Development Goals, which are an internationally accepted standard, have a goal – improved maternal health, for which it specifies an objective – a three quarters reduction in Maternal Mortality Ratio by 2015. It lays down two indicators for this. One is of course the Maternal Mortality Ratio itself and the other is the proportion of births attended by skilled health personnel (as defined and measured by UNICEF and WHO). There is therefore international sanction to use this as the proxy indicator, even as we make efforts to better estimate MMR. Please note also that the definition of skilled health personnel is such that childbirths assisted by trained traditional birth assistants would not be included in this list.

References:

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2. P.N. Mari Bhat; Levels and Differentials in Maternal Mortality in Rural India: New Evidence from Sisterhood Data. Working Paper 87,NCAER;
3. Bhat, Mari, K. Navaneetham and S. Irudaya Rajan (1995), "Maternal Mortality in India: Estimates from a Regression Model", *Studies in Family Planning*, 26(4): 217–232.

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Review Questions:

1. What is the difference between Maternal Mortality Rate and Maternal Mortality Ratio? When we usually say MMR, what are we referring to?
2. What are the limitations of NFHS data for MMR reduction planning?
3. Should we use the MMR used by a regression estimate from just the skilled Birth assistance % figures for planning our programmes? What are the limitations of this method?
4. What is the indicator being suggested as adequate for planning maternal mortality reduction strategies at the district level?

Application Questions:

A collector suggests that we do a survey and we can find out the maternal deaths in the last one year. He says he will order all the ANMs and AWWs (or some other category of worker) to do this survey? This is not going to be helpful and waste every one's energy. How would you explain it to him? What else would you suggest so that his enthusiasm can be channelised?

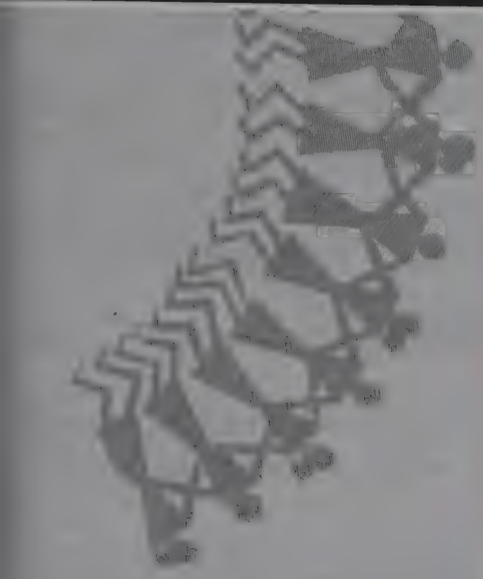
Project Assignment :

Look at Verbal Autopsy forms in the Annexures. Do at least one Verbal Autopsy. Discuss how getting verbal autopsies done on every maternal death as done in Tamil Nadu may be more useful. [In Tamil Nadu there is an insistence that every maternal death should always be reported at once to the Collector's office and to the Health Department so that the Verbal Autopsy can be organized.]

NOTES

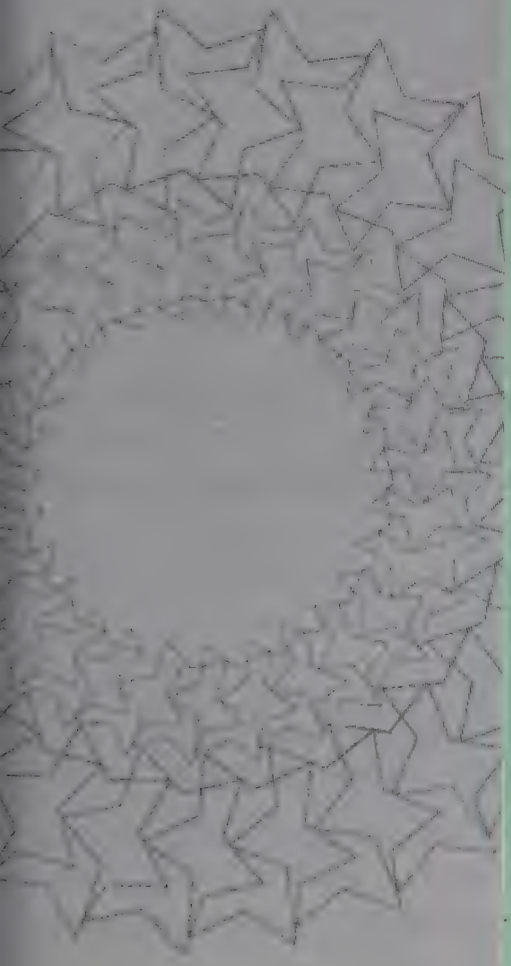
Lesson THREE

Constraints in Implementing Strategies for Reduction of Maternal Mortality



In this lesson we shall discuss:

- The constraints or bottlenecks in implementing the well-known key strategies for reduction of maternal mortality–
  a) Referral Transport Systems
  b) Skilled assistance at birth
  c) Emergency obstetric care
  d) Safe MTP services
- The steps needed to overcome these bottlenecks.
- Innovative ways to fill the gap for specialist requirement at periphery
- The basic difference between BEmOC and CEmOC.



1. REFERRAL TRANSPORT: BOTTLENECKS

What do we mean by referral transport arrangements?

Either ambulance services should be available which can be called with little time delay and which is responsive to such calls

OR

People are able to access other private means of transport and pay for its use.

1. LACK OF AMBULANCE SERVICES:

Common reasons attributed for this are

a. There is a lack of ambulance in the district- especially for public health system. This is the most common explanation given but seldom is it literally true. Of course if there is no ambulance in each block/CHC, there should be efforts made to get one. But the real question is – is referral transportation happening wherever there is an ambulance available. The truth is that there are usually ambulances available, but no ambulance service.

b. Ambulances available at the CHC or district hospital are occasionally used to transport patients to a higher facility but rarely respond to calls from a village to come and pick up a patient. The reasons given are that the vehicle is under repair or the driver is on leave or the vehicle has been sent to pick up stocks or escort a VIP etc., and that it is not available for hospital duty.

c. In a rigid interpretation of government rules we would require three drivers in shifts, and adequate fuel advance to be able to maintain this service every 24 hours. However- at current levels of utilisation- the 'need' for an ambulance is so low that it would ill afford to pay for three drivers and fuel advances are difficult to monitor.

What can be done?

The ambulance is leased out to a well chosen NGO which is willing to organize this service. Some institutions like Ex Serviceman's Association or Red Cross are particularly keen on playing this role. This is discussed in the section on Best Practices (lesson 4).

Considerable action can be taken by a dynamic block medical officer. For example, the BMO could make sure that the driver is almost always available and when he is not available, another person is trained or has the skills to take his place. He may also encourage the public to use this service and promote its utilization as a goal.

The goal should be that *the average time it takes to take and bring back a patient to a CHC should be less than an hour* from the time its base station receives the information (if the ambulance is not out on another emergency call at the same time).

2. Poor utilization of Referral Transport Funds/ Janini Suraksha Yojana Funds

The JSY funds are only recently released in most states and it is too early to comment on their utilisation, but it is worth looking at the experience with earlier referral transport funds.

The referral transport funds were given under RCH-I project to the district RCH societies who gave it to the panchayats. Panchayats were to use it to fund transport for poor patients using private vehicles that they arrange for themselves (with the understanding that an ambulance service run by an ambulance service provider was a more difficult option to make functional). There was very poor utilization of this fund and this "referral transport funding" approach was largely seen as a failed approach. Here are some reasons that explain this outcome:

The fund was not given to all panchayats- only to some – which made field level monitoring the programme difficult.

There were no written instructions that were sent down along with the funds. So panchayat often did now know what to use it for, what expense was permitted and what was not permitted, what sort of accounting was required etc.

There was no system of referral transport in place. Either there were no vehicles who could be called, or if there were a few private vehicles no understanding was reached with them that they could take the patient with a BPL card free and the panchayat would reimburse them later. There were few referrals happening anyway. Since there was no precedent of calling the ambulance and transporting the patient, it was unlikely that when a poor patient needed it in an emergency situation people would know whom to call, how to call and be confident that there would be a response to the call.

All these three problems are also going to affect the Janini Suraksha Yojana. The key to resolving this bottleneck in the JSY context is going to be getting the ASHA to make such a plan for each village by which referral transport is routinely accessed at well known rates.

Myth, Fact or Partial Truth

The department of health officials would commonly attribute the poor utilization to the fact that the funds were given to the panchayats and not to peripheral heath department staff who would have presumably used it well. However this is open to question. After all, so many funds given to department are also poorly spent. However it is true that since the fund was not given to the department- the department would not own responsibility for its poor expenditure and it was easy to blame the panchayat. One lesson we may derive is that if funds are given to a panchayat earmarked to a specific health service, then the district administration must be in a position to create and circulate guidelines for its use, monitor the fund flow and ensure coordination with the health department- rather than leave it to the health department alone.

3. Referral Linkage Between Sub-centers And PHCs And CHCs:

It is one dimension of the problem to link every family in every hamlet with the first referral center. But there is a separate urgency to link every sub-center and every PHC with the CHC through a referral transportation system. This is because the sub-center and PHC are to become sites of institutional delivery once they have been trained for skilled assistance at child birth. For this to impact maximally on reduction in maternal mortality, referral linkage is important. Since more deliveries happen in a facility as compared to scattered villages the importance of linkage by referral transport is more here. Indeed the principle should be that if a pregnant woman in labour reaches a PHC- or even a sub-center, then the health system should shift her to the first referral center *at its cost* if there are any complications. Otherwise one cannot encourage institutional delivery in peripheral facilities. This implies that there should be a phone contact possible – with messenger to nearest phone if need be –by which one can call to get an ambulance to reach within half an hour to the PHC or sub-center. This should be immediately possible for all PHCs and soon possible for all sub-centers.

Definition:

The term 'skilled attendant' refers exclusively to people with midwifery skills for example midwives, doctors and nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage or refer obstetric complications.

Source: A Joint WHO/UNFPA/UNICEF/World Bank Statement on Reduction of Maternal Mortality, 1999.

Skilled attendance is more than safe delivery. It is recognized that "Having a health worker with midwifery skills present at every childbirth, backed up by transport in case emergency referral is required, is perhaps the most critical intervention for making motherhood safer." (Safe Motherhood Technical Consultation, Colombo, Sri Lanka 1997).

Skilled attendance requires more training, more drugs, and more systems in place. Achieving this has proven elusive. Let us try to understand the bottlenecks:

1. GROSSLY INSUFFICIENT CURRENT LEVELS OF TRAINING :

a) Because very few ANMs get to assist with child-births under supervision even in ANM pre-service training.

b) Because there are no regular programmes of re-training for ANMs.

c) Because now skill levels expected of ANMs have been upgraded to many elements of what is called basic emergency obstetric care and few ANMs have this level of skills. Without such levels, it is useful to have ANMs assisting at child births but does not sufficiently lower maternal mortality.

But to provide training the following need to be in place

a) A proper training manual which can be followed page by page with a log book to ensure that skill training is adequately imparted.

b) A proper venue for skill training: At least 10 child births assisted under supervision. Thus, for a batch of 20, the training center should have about 250 births happening in one month!!!! (Since not every child birth would be left to the trainee ANM to do).If there are only about 100 child births happening per month then about 7 or 8 persons can be training in a batch per month.

c) A proper training evaluation – both formative and summative and then certification. Too often there are complaints that training is making no difference- implying that motivation is the key problem. This is typical of an administrative approach. The correct question for the administrator to ask is who did the evaluation, was the evaluation done properly, and what did the evaluation show. The day that administrators start asking for evaluation reports and asking a state level agency to professionally conduct evaluation, much of the problem would go away.

d) Adequate training of trainers and ensuring that the same trainers impart training to the ANMs.

Note all the above training is relevant not only to ANMs but to all staff nurses also- especially those posted in PHCs and CHCs.

2. Lack of Supplies for skilled birth attendance:

Essential drug lists should include drugs and supplies needed for skilled birth attendance and sub-centers and PHCs and CHC should have these without interruption.

3. Getting the ANM in the sub-center to conduct deliveries:

a) One problem is that the ANM has to go to the anganwadis four days per week for immunisation and one day or sometimes two days per week to the sector level for review meetings. That gives her only one day per week or at best two days at the headquarters. Thus the sub-center is so often empty that no one would come there. This is more so a problem where hamlets under an ANM are many, small and scattered. In a large village where there is only one anganwadi center and the ANM is in the village it is much more possible.

b) The other problem is that for home deliveries to happen with the ANM present she should get information in time and there should be not too much of a geographical scatter. If the hamlets are scattered there is less likelihood of going to each household for assistance.

c) The problem is also increased by the practice of an illegal or informal charging of fees by the ANM. Rates for home delivery vary from Rs 200 to Rs 600 – and this could be a serious limitation for scheduled caste and tribes and for very poor people to afford ANM.

d) Even after overcoming all these problems, if we do manage to get the ANM to conduct delivery at home, or even in the sub-center, the impact on maternal mortality would be limited unless the skills and support systems reach a minimum level as defined by the concept of basic emergency obstetric care.

Do Consider this:

The Sub-center should be an optional back up site for institutional delivery. The main preferred site should be the CHC or the PHC. The PHC would have the space, the beds, the staff and the systems needed for institutional delivery. One can incentivise the PHC to ensure that they take up a better load of cases then they do today. Deliveries at the PHC and CHC can be monitored for quality of care much better than when they are scattered. Thus having a skilled birth attendant at home would be seen as only a transition to institutional delivery and the sub-center would be only a fall back option for institutional delivery. In case there is someone who cannot or will not go to the PHC or CHC but is willing to come to the sub-center the delivery can happen in a large village or in any sub-center with convenient location or any sub-center where two ANMs are posted.

> ***Moral:*** *To increase skilled delivery rates best approach is to aim for increased institutional delivery.*

So what is institutional delivery?

Institutional Delivery is a child birth happening with skilled assistance in an institution which is built, equipped and managed to provide this service as one of its functions.

Institutional Delivery has the advantage that there is greater certainty for the pregnant woman of finding skilled assistance at any time and that the skilled assistance is able to access all the drugs, equipment, human support and referral transport much easier than if she had received the skilled assistance at home. In a PHC or CHC we assume that one or more persons with the necessary skills are always present- at least the skills needed for what is known as basic emergency obstetric care. There is meant to be a medical officer and nurse posted there who has, by definition, been trained for this. However one is not sure of all these elements of institutional delivery – skills, drugs, equipment, easy access to referral transport- being available in any sub-center. The Government of India's instruction is therefore to carefully assess and accredit a sub-center for playing this role. All sub-centers do not automatically qualify – and a home delivery done by an ANM or even a doctor is NOT an institutional delivery. Perhaps they needed to extend this rule for PHCs also and not assume that medical officers have the necessary skills by definition. Therefore, if we are planning for institutional deliveries, we must invest some time in deciding which institutions can be so accredited.

III. EMERGENCY OBSTETRIC CARE: BOTTLENECKS

1. Lack of Infrastructure, Equipment, Human Resources & the Problem of Mismatches

The above mentioned are the most commonly attributed reasons for deficiencies in EmOC and the implication is that there were lack of funds. However this is again a myth or at best a partial truth. In every state under RCH-I a large number of FRUs were built up- or at least funds were provided for this. Before the NRHM, many CHCs were provided with at least 10 beds and a functional OT which is adequate for all FRU services. Quite often due to disuse some of this infrastructure and equipment has been purchased/built two or three times over.

One reason for non-functioning even after funding to close gaps is the problem of mismatches. Thus one has purchased Boyle's apparatus for one CHC, repaired the OT in yet another place but the specialists are available in a third CHC which has neither equipment nor OT. This happens because purchase and civil works are driven by processes and motives and done by persons who are not in any way related to

those entrusted with getting the FRU functional. In some way, the persistence of one or two gaps becomes a convenient excuse for not starting up the FRU which would mean more work for everyone. Or there may be a conflict of interests with some specialists working in both public and private sector.

One way out of this bottleneck is to insist on taking up a few CHCs and ensuring all the gaps are closed – till one can get a "no more excuses" report from the CHC. We must support the CHC till this no more excuses stage is reached. That is why the NRHM has gone for an approach of two blocks per district.

It is possible to use the funds placed at disposal of Rogi Kalyan Samitis to close minor gaps and funds from NRHM and other development partners (read donor agencies) to close major gaps. Development partners are only too eager to provide funds for this.

The aim is to have FRUs within one or two hours of every village. So we could first start with ensuring that district hospitals and then sub-district hospitals can perform these functions and then take up CHCs with such a distribution so as to achieve this goal.

2. Closing Specialist Gaps:

It is important to have a set of specialist skills in the FRU. The minimum specialist skills needed are emergency neonatal care, emergency obstetric care, anesthesia, as needed for emergency surgeries, and technical support for ensuring blood transfusion.

Of course if we remember that what applies to first referral needs for emergency obstetric care also applies to emergency general surgery (hernia, acute abdomen etc.), emergency trauma care and medical emergencies (like cerebral malaria, severe anemia, diabetic ketoacidosis, epileptic fit etc), then a number of specialists would be needed. Thus the minimum list is – a gynecologist, anesthetist, pediatrician, physician and a general surgeon in each FRU.

1. The main bottleneck usually is *sanction of posts*: In many CHCs there are no such sanctioned posts. We must check whether these posts are there . If not, it should be ensured that the following is done by order.

    a) Create posts for these specialists – five in each CHC and then recruit to fill it up.
    b) At sub-divisional and district hospitals create three posts in each speciality so that round the clock specialist services are available.

    This has been done in many states like Tamil Nadu, West Bengal, Chhattisgarh and Rajasthan.

This takes time and effort to do – but the question for monitoring is whether the files for this have begun to move. Since this is a high level decision one would need to get the chief minister, health minister, chief secretary, finance secretary, health secretary and directorate to agree on this. This takes a lot of doing unless there is a health secretary who is able to drive it forward.

2. **Next bottleneck:** ***Getting the posts filled.***

Option 1: ***Transfers***: One option is to ensure that all specialists working in PHCs are shifted to CHCs or district and sub-divisional hospitals which are chosen for FRUs as a priority. Otherwise the specialists lose their skills while the FRUs go into disuse for lack of these very skills.

This simple decision is very difficult to achieve but needs to be mandated. Again it needs the interest of decision makers and some urging from watchdog bodies.

The limitation is that the needs are high and the above move would only help to a small extent. Depending on the specific situation however, states like Tamil Nadu and Assam have made their FRUs work only by prioritizing this move.

Option 2 : ***Contractual Recruitment from All India.*** Another option is contractual recruitment through all India advertisement: A Scales of Rs 18,000 basic with another 10,000 for performance based incentive was offered by many states. It helped find a few more specialists.

Option 3: ***Public –Private Partnerships***: Yet another option is to contract in specialists from the private sector for C-sections and even for regular consultations. This can be done on a case by case basis. Funds can be placed with the hospital development committee (RKS) for this. The funds for operationalising FRUs under NRHM can also be used. RCH-II proposals can make provision for this. This may find a few specialists but the usual problem is that where the public sector is weak the private sector is also weak.

Option 4: ***Multi-skilling*** : The last option proposed is really the most viable option for closing the gaps, i.e, taking willing medical officers already posted in the CHC and providing them with specially designed short term(4 to 6 months) life saving specialist skills courses in emergency obstetrics or emergency anesthesia or emergency pediatrics – or for that matter in emergency medicine and common surgical emergencies or for trauma care.

This requires only that there are four or five medical officers available per CHC.
But getting this approach to yield results takes a lot of effort. That is outlined in a separate section.

Option 5: ***All four options together and the Road Map:*** One may note that in fact all the four above are not mutually exclusive - even if they are tried together over 50% of FRUs required may not have the requisite skills. But one can draw up a road map based on this so that in five years time we reach the required number of FRUs.

Making FRUs Operational & Administrative Competence:

With so many failed attempts at making FRUs operational it is easier for every one to declare failure. This in itself becomes a bottleneck. Given the wide variety of inputs that need to make an FRU operational there needs to be careful attention to different elements of the FRU so that they all fall into place simultaneously. This also includes BCC campaigns, increasing referral services etc. Some of the work elements have high financial expenditure but relatively negligible impact on outcomes – for example raising an FRU to IPHS standards through construction of a 30 bed ward and so many additional rooms etc when there is already a functional operation theatre and about 10 beds in place. On the other hand there are other work elements like ensuring that referrals are being encouraged, or that specialist skills have been created through training which are effort intensive but relatively low in expenditure. Competent administration requires that both be planned for in tandem. Unfortunately this does not happen.

Secondly since the gap between needed FRUs and existing FRUs are large there is a lot of reluctance to start off since then every FRU would become answerable. Good administration needs to focus so that a few models get built up to act as benchmarks for the rest. Also funding needs to be linked to service delivery outcomes and the pressure to expend money flows not only from centre to state, but even from state to district, must be tagged to achievement of milestones.

IV. SAFE MTP AND OTHER RCH SERVICES:

A major cause of maternal mortality is deaths due to unsafe termination of pregnancy. The most important preventive measure is to make Medical Termination of Pregnancy available in every center which has FRU services. Since the skills needed for this are less intensive than for C-section even MBBS doctors can be trained for this with relative ease.

There are two important bottlenecks that prevent this:

a) there is no regular periodic training programme for safe MTP. It needs to be kick-started each time from a central government initiated scheme as a separate vertical programme.
b) That the FRU is interpreted narrowly as starting up emergency obstetric services and the importance of taking along all elements is lost.

The best way to over come these bottlenecks is to make this package a part of the life saving specialist skills programme – along with conventional tubectomy services, vasectomy surgery (non scalpel or conventional) and RTI management. Thus, reproductive health services mentioned below should be available along with emergency obstetric care in a FRU/ CHC :

a. Safe MTP whenever needed
b. RTI diagnosis with necessary diagnostic kits and its management
c. Conventional- if possible laparoscopic – tubectomy and vasectomy services on a fixed and well publicized day every week.

SKILLS REQUIRED TO DELIVER EMERGENCY OBSTETRIC CARE OR ESSENTIAL OBSTETRIC CARE

WHO Criteria of Basic and Comprehensive Emergency Obstetric care

☞ *Comprehensive Emergency Obstetric Care – (CEmOC) Hospital based*

Comprehensive EmOC comprises ability to perform

- Basic EmOC plus the following
- Surgery (Caesarean section)
- Anesthesia
- Blood transfusion

Providers –

- Obstetricians
- EmOC trained Doctors
- Surgeons

☞ *Basic Emergency Obstetric Care –Primary Health Care Facility Based*

Basic Emergency Obstetric Care comprises of ability to –

- Administer Parenteral (intravenous or intramuscular) antibiotics
- Administer Parenteral oxytocics (to control Postpartum bleeding)
- Administer Parenteral sedatives or anticonvulsants (for eclampsia)
- Manual removal of placenta (to stop hemorrhage)
- Removal of retained products of conception (to prevent bleeding and infection)
- Assisted vaginal delivery (to alleviate prolonged labor)

Providers –

- Doctors
- Staff Nurses
- LHVs (Lady Health Visitors)
- ANMs (Auxillary Nurse Midwives)

☞ *Subcentre EmOC*

Subcentre (*Homebased Emergency Obstetric Care that overlaps the definition of skilled birth assistance*) comprises of ability for timely detection of obstetric complications and following management before referral

- Administer Parenteral (intravenous or intramuscular) antibiotics
- Administer Parenteral oxytocics (to control Postpartum bleeding)
- Administer Parenteral sedatives or anticonvulsants (for eclampsia)
- Manual removal of placenta (to stop hemorrhage)
- Manual Removal of retained products of conception (to prevent bleeding and infection)

Providers –

- LHVs (Lady Health Visitors)
- ANMs (Auxillary Nurse Midwives)

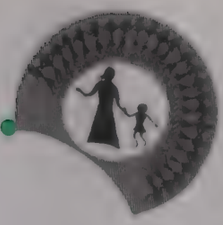
FAQ:

What is the difference between Skilled Assistance at Birth and Basic Emergency Obstetric Care?

In terms of service provision both are nearly the same – though basic emergency obstetric care includes assisted vaginal delivery which is not implicit in skilled birth attendant. Also the term basic emergency obstetric care implies that a doctor is available at least as a back up while in skilled birth attendance a doctor's presence is not required. In practice where a suitably skilled nurse is available there is very little difference between these two terms.

What is the difference between Comprehensive Emergency Obstetric Care and Basic Emergency Obstetric Care?

Comprehensive Emergency obstetric care is Basic emergency obstetric care plus the capacity to undertake Cesarean sections and give blood transfusions.



Review Questions:

1. list the steps and options in making transportation available for all obstetric emergencies.
2. how can the ANM be helped so that skilled birth attendance is available at all deliveries?
3. What is an FRU?
4. what is the minimum staffing requirement of an FRU? list and discuss the various options to make adequate staffing available at all FRUs
5. what is BEmOC and how is CEmOC different from it?

Application Questions:

1. In your opinion, which is the best place for deliveries to happen and by whom? Justify your answer and discuss how you can achieve what you think is the ideal situation and at what costs.
2. what could be the potential advantages of functional FRUs over and above improvement in maternal mortality?

Project Assignment:

a. What are the government schemes for addressing costs of transport for emergency obstetric care? In your district what is it s utilization and what are the causes for this level of utilization

b. What is the level of skilled assistance at delivery in the district?

c. How many ANMs have not done any management of delivery last year (they are likely to have no skills)

d. How many ANMs have been trained on skilled assistance at delivery within last two years in the district? How many would need to be trained? Which is the training center available for such training?

e. What is the number of emergency obstetric care centers needed and what is existing in the district? How many would be for basic care and how many for comprehensive emergency obstetrics care?

SPECIAL EXERCISE: NOTE-SHEET CREATIVITY

Given below is a model "note-sheet" put up for getting a plan to achieve 100% skilled assistance at delivery approved:

A note-sheet is familiar to everyone working in government and a mystery to all others. The note sheet is the form in which one government officer puts up a proposal on file and as it passes up the chain of command to the deciding officer the various officers in between and those concerned with the decision make their comment on writing on the file. Thus when the decision is made the note sheet remains a clear record of all the persons and the views that went into decision making. Along with supporting documents – it is the government file. One of the skills that one needs in governance is to make a clear précis of all the issues such that a decision can be made on it. The last line of the note sheet states the decision required. When a government officer tells a resource person – this is all too academic , be practical – possibly what he wants is a note sheet summary. One of the necessary skills of a resource persons is to make note-sheets of complex issues.

Note-sheet: Example 1

Sub: Achieving 100% Skilled Delivery – Training under RCH-II:

As desired by you and discussed, we put forth the following proposal for implementation *in the same blocks as taken up for upgrading the CHC to FRU levels* for achieving 100% skilled delivery rates from the current level of only 15% in the district.

In block XY last year with a population of 100,000 there were approximately 3000 births last year(using an estimate of 30 per 1000 crude birth rate— the district had an crude birth rate of 32 per 1000 in census of year 2001). According to our reports, 75 births took place in the CHC over one year. There were no births in the three PHCs. Amongst the 22 sub-centers and 20 ANMs there was a total of 125 deliveries conducted last year. Only 5 of the 25 ANMs, however, had conducted deliveries. Also about 180 deliveries from this block took place at the district hospital (the district hospital had 1800 births last year –since the district has ten blocks we can assume a maximum of 180 from each block) . Thus there are a total of 380 skilled birth assisted deliveries or 12.67% deliveries in the public health system of which institutional delivery is only 8.5%(The district town has three private nursing homes which have also together conducted 2000 deliveries, most of them being from the urban area and well to do

population.I If we assume that even 150 of these were from this block the skilled delivery percentage rises to 17.67%.).

To reach a 100% skilled delivery situation we plan for 60 deliveries per month in the CHC (720 per year) plus 30 deliveries per month in each of the three PHCs(1080 deliveries) and 500 deliveries by ANMs/in the sub-center or about 25 per ANM per year. That is 2 deliveries per day per CHC and 1 delivery per day per PHC and about 2 to 3 deliveries per month per ANM – which should be a reasonable objective. This along with about 200 deliveries per year in the district hospital and same amount in the private nursing homes would lead to a total 2700 deliveries with skilled assistance per year - which is near 100% .

To achieve this however we have to train the 25 ANMs plus 5 supervisor LHVs and the 8 staff nurses in the CHC and PHC. Since the district hospital has only 150 deliveries per month we can train a maximum of about 10 nurses or ANMs per month. So to train all the persons who need training in both blocks, we would need six months. The budget for this training is given in annexure 1 and comes to Rs 12 lakhs per block. This may be approved and given to the district training center. The SIHFW will evaluate the training., Training of trainers and preparation of training material has already been completed by SIHFW.

The plan for IEC to help increase skilled assistance at delivery has been submitted and approved separately. However, without improving the supply side this would not help. The plan for involving the private nursing homes will be discussed after seeing the results of this plan since this is likely to be cheaper and more practical if it works. We note that we have already released funds for renovation of labour rooms etc and for purchase of necessary equipment for this. It is therefore important to complete both this training and introduce the incentives as proposed, for the release of next instalment of funds is dependent on this.

Proposal is to release Rs 24 lakhs to the district of XXX for skilled birth attendance training in two blocks. You may like to approve this.

Note-sheet: Example 2

Sub: Incentives for Improving Skilled Delivery:

As per our discussion this proposal is put up to give a sum of Rs 200 per delivery to every ANM or staff nurse where the delivery targets set for the CHC, PHC facility or ANM have been achieved. If the number of deliveries are less than the set target than no incentive is paid. Even if we achieve 100% skilled delivery, the total financial burden of this performance based incentive would amount to Rs 4.6 lakhs per block per year which is about Rs 8 crores per year for the state. This much is needed to kick –start the programme. It will help overcome motivation problems within the department at a time when we are giving incentives to ASHA and to the BPL women for institutional delivery and when we are considering giving reimbursement at Rs 400 to Rs 600 per case for private sector partners- which would be as difficult to monitor. It would also help if at the time of introducing this we passed orders to take strict action against ANMs charging fees from patients for delivery and asked local bodies to monitor that this practice of charging Rs 400 per delivery almost routinely stops as this is one major reason for the low skilled delivery rates.

To reach a 100% skilled delivery situation we plan for 60 deliveries per month in the CHC (720 per year) plus 30 deliveries per month in each of the three PHCs(1080 deliveries) and 500 deliveries by ANMs/in the sub-center or about 25 per ANM per year. That is 2 deliveries per day per CHC and 1 delivery per day per PHC and about 2 to 3 deliveries per month per ANM – which should be a reasonable objective. This along with about 200 deliveries per year in the district hospital and same amount in the private nursing homes would lead to a total 2700 deliveries with skilled assistance per year - which is near 100%

In the first year we can set the target at half the above amount to qualify for the incentive. That is a minimum target per month of 30 deliveries for a CHC, 15 deliveries for a PHC and two deliveries per month for an ANM. The minimum target would be achieved once a CHC has reached 360 deliveries , or a PHC has achieved 180 deliveries. After this minimum target is achieved every extra delivery in the rest of the financial year would be given an incentive Rs 250 per case to be shared at Rs 100 for doctor and Rs 100 for the nurse/ midwife and Rs 50 for the sweeper helper. The incentive is limited to the two blocks per district where skilled birth assistance training is completed and the facilities are equipped as per norms. The financial burden is

estimated to be about Rs 2.5 lakhs per block if the achievement is 1000 deliveries more than the minimum goal. This works out to Rs 5 lakhs per district or Rs 1 crore for the 20 districts of the state. These funds are available under the RCH-II flexi-pool. This incentive replaces the night duty allowance that was being paid under RCH-I and which we have had poor results with.

Monitoring can be given to the hospital development committees and the incentives can be given through them as reimbursement. For sub-center level achievement we can ask the panchayat to monitor, but for now payment would be made by the district health society directly to ANMs, based on the ANMs report as verified by the supervisor.

We therefore request you to approve the sum of Rs 2.5 lakhs for each of these two blocks i.e Rs 5 lakhs per district to be drawn in two installments 6 months apart and given to district health society.

Questions:

Based on the above two model note sheets can a plan be drawn up for:

a) achieving 100% skilled assistance at birth in your district.

b) a scheme to incentivise staff for achieving good performance in institutional delivery.

"The note would have to specify :

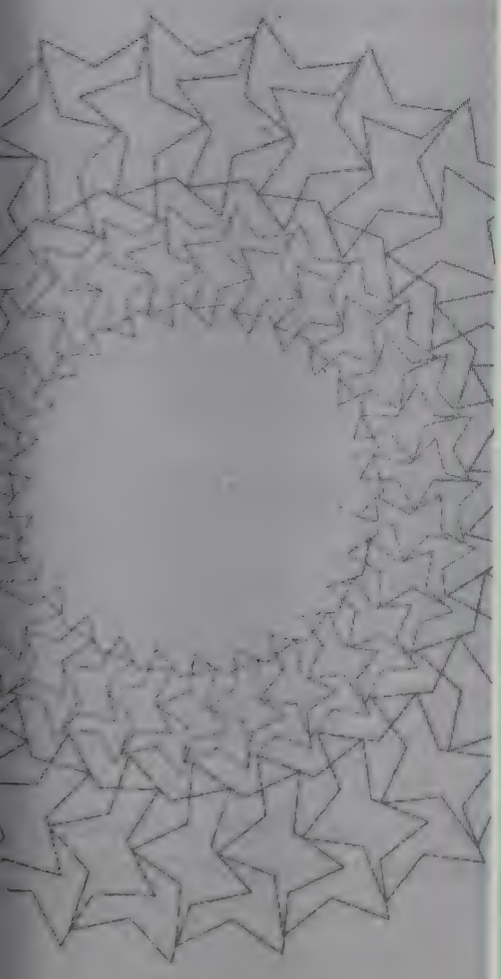
- the amount of incentive,
- the criteria of payment,
- the head from which funds are available,
- the rules that allow it (or permission for the rule),
- the monitoring arrangements, and finally
- the exact decision needed on this note-sheet."

NOTES

Lesson FOUR

Best Practices

In this lesson we shall discuss four innovative approaches that have overcome longstanding constraints in planning for reduction of maternal mortality:



- Verbal autopsy to study the determinants of maternal mortality and the possible ways of prevention of further deaths in the district context; an essential input to a district plan.
- Partnerships to address the ambulance – referral transport gap.
- Incentivising staff members for "Institutional Delivery" in public sector hospitals.
- Identifying and addressing demand side factors in institutional delivery.
- Short-term courses to close specialist gaps for establishing emergency obstetric care.

VERBAL AUTOPSY:

DEFINITION:

This is a technique of determining the cause of a death by reviewing the oral testimonies of the family members, health care providers and others who have relevant information to determine the cause of the death.

Why do we need verbal autopsies in cases of maternal mortality ?

Addressing high rate of maternal mortality needs multi-strategic approach for reduction of the same. One framework of analysis of the causes of maternal mortality is by the 'three delays analysis' adopted by World Health Organization as shown below.

PHASES OF DELAY	FACTORS AFFECTING UTILISATION OUTCOME
Delay 1 : Delay in recognizing the problem Delay in deciding to seek care	Economic, Educational, Women's status, Non-availability of skilled attendant
Delay 2 : Delay in reaching the health facility	Distance/Transport/Roads/Cost
Delay 3 : Delay in receiving adequate treatment once a woman has arrived at the health facility	Quality of Care in the health facility

We have learnt how each of these above factors can be addressed.

However creating the capacities at the habitat and the family level to ensure prompt health care seeking, or the building up of a referral transport system, or the creation of capacities to deliver CEmOC or BEmOC does not by itself mean that these would all happen.

Many human failures, motivational deficits and systemic dysfunctions can lead to failure of service delivery or costly time delays that would adversely impact on maternal mortality. Once these capacities and facilities are in place, **Verbal Autopsy** can be used as a technique to identify what element in the above is failing or functioning sub-optimally and address it.

Two surveys of maternal mortality using verbal autopsy conducted in Egypt in 1992-93 and 2000 showed that MMRs in that region ***halved*** during this period![1] Thus the verbal autopsy is a definite tool to provoke decrease in MMR provided there is a will to follow up on the issues and bottlenecks it throws up.

Verbal autopsy is best done by the administrative or health staff, after physical gaps are closed and capacities are built up, but it can be done even before as a tool of sensitization to the system. The net outcome of this technique if it is limited to sensitization would be much less. Civil society may however use verbal autopsy as a way of bringing public attention to bear on physical gaps and on deficient capacities.

Description of Verbal Autopsy in the Tamil Nadu Health Sector:

Systematic reporting and auditing of maternal deaths was first introduced in Tamil Nadu in 2000. All maternal deaths are reported directly within 24 hours to the Commissioner, Maternal and Child Health & Family Welfare by the field health functionaries, Anganwadi workers, Primary Health Centre (PHC) medical officers. This is followed by a detailed investigation report by an obstetrician within 15 days. The multiple reporting is collated at the state level by the statistical staff.

A clear system has been laid down which specifies the person responsible for reporting the death according to whether it occurs at home, in transit, in a health sub-centre, PHC, public hospital or in a private health facility or nursing home.

The Deputy Director of Health Services (DDHS) at the district level is responsible for collecting the relevant information and monitoring the reporting to the Commissioner, the Director of Public Health and the Joint Director of Health Services within 24 hours of the occurrence/ receipt of the information.

A district level maternal death investigation team has been formed to improve the quality of investigation. The team, whose obstetrician rotates on a monthly basis, is accompanied on its visit by the local PHC medical and nursing staff. The DDHS makes the logistical arrangements (fixes the dates, arranges the vehicle etc).

[1] Source: Policy Reforms Option database: www.prod-india.com

*To guide its work, the team uses a "**Maternal Death Investigation Case Sheet**" which collects information on:*

(i) the location of the death
(ii) the economic, social and educational profile of the family,
(iii) the deceased's obstetric history and record of antenatal, delivery and postnatal care, referral, and
(iv) the circumstances of death.

The team meets the relatives of the deceased and visits the health premises where she was treated to examine case records and interview staff.

It is the obstetrician's responsibility to analyse the direct and indirect obstetrical causes which led to death. The report is also expected to highlight any system failures.
The other members of the team examine specifically the service delivery and social determinants related factors including antenatal care, risk factors and/or complications, delay in referral or in initiation of treatment, non-availability of specialists, equipment, blood, etc.

The team feeds back their findings to all the personnel who were involved in care, with suggestions as to corrective measures designed to prevent recurrence.
The findings are also placed before the Maternal Deaths Medical Audit Committee on a monthly basis. This committee's minutes are placed before the District Reproductive and Child Health (RCH) Committee chaired by the District Collector, which also receives relatives of the deceased who are invited to give their account of the events.

The minutes of both meetings are placed before the Commissioner. The findings are also fed back to the relevant First Referral Units (FRUs) and PHCs. An annual analysis of maternal deaths is carried out at district level to give insight into the corrective measures required. A quarterly meeting is held with the Joint Director of Health Services and the DDHS to discuss measures for the reduction of maternal mortality and morbidity on the basis of the district investigation reports. A state level committee has responsibility for assessing the quality of maternal death investigations, visits FRUs at random and reports back to the Commissioner every month.

Results:

No specific evaluation of the impact of maternal death audits has been carried out till now in Tamil Nadu though anecdotal evidence suggests that it has been effective in many ways.. Significantly, according to the Government, the number of maternal deaths has declined by 25% between 2001 and 2004 (from 1636 deaths to 1219 deaths)[2]

[2] Source: 'Policy and Practice' Bulletin of the WHO, June 2005, 83 (6)

Now the maternal death audit has been improved further and Verbal Autopsy of maternal death is being conducted.

Available on request

Maternal Death Protocol and Investigation Case Sheet.
Verbal Autopsy questionnaire for investigation of maternal deaths.
Report on Good Practices and their Cost Effectiveness (Reproductive and Child Health) Volume III GOI Department of Family Welfare; European Commission, March 2004

Weblink: Health & Family Welfare Department, Government of Tamil Nadu - Reproductive & Child Health Programme (http://www.tnhealth.org/rch.htm

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AMBULANCE SERVICES THROUGH PUBLIC/NGO PARTNERSHIP

Objective:

To provide affordable ambulance services which can transport patients from their homes or site of accident to an appropriate facility.

Description:

Under a pilot scheme, the Tamil Nadu State Government identified NGOs willing to organise and run transport services for emergency obstetric cases and road traffic accidents.

After a whetting procedure, the selected NGO, the Seva Nilayam Society, was given two vehicles free of cost. The vehicles were fitted with communication and life saving equipment, drugs and medicines.

In this district there is a chain of Emergency Accident Relief Centres, each manned by an Auxiliary Nurse Midwife on a 24 – hour basis. These are located at 50 km intervals along all National Highways in the state. The centres can be contacted on a toll free number. This ambulance service is located in one of these accident relief centers.

The NGO is expected to take care of vehicle maintenance, driver and paramedic salaries, fuel charges and insurance.

It can charge no more than Rs. 5 per km - Below Poverty Level (BPL) cases must be transported free. The NGO is expected to offer services free of cost to 10% of cases and all accident emergencies are transported free of cost.

The NGO must recruit two drivers and two nurses, train them and ensure they are available to provide 24-hour services working in shifts.

Results:

The scheme is monitored by a committee headed by the State Deputy Director (Health), the project director and the director of the NGO. The Deputy Director Health Services at the district level also monitors the programme.

In Theni district, 30 to 45 emergency cases are transported every month. Out of the total number of cases transported, 30% are obstetric emergencies.

Tamil Nadu Government Health and Family Welfare Department budgeted to spend Rs. 6.5 lakh on the scheme in the year 2003/4 to provide vehicles and wireless network in Theni district. Two (second-hand) vehicles cost Rs. 5 to 6 lakh. The NGO incurs a cost of around Rs. 4-5,000 per vehicle per month.

The scheme is particularly cost effective because the department put to use older vehicles lying underutilized due to lack of drivers/staff.

The main problem was in finding an NGO which is willing to spend out of its resources – for it is certainly not a profit-making or even break-even proposition. However the scheme is viable because number of other NGOs and districts have shown interest in replicating this.

The State Government has found that 30% of accident deaths occur either during transportation to a hospital or due to lack of emergency care at hospitals.

In Haryana, the same problem is being tackled by recruiting ex-servicemen as drivers of ambulances at the block level. The driver is allowed to charge Rs. 5 per km (private companies charge INR 7 per km) and must maintain the vehicle himself.

For further information :

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3. INCENTIVISING INSTITUTIONAL DELIVERY IN THE PUBLIC HEALTH SYSTEM:

Objective:

To promote greater service delivery on institutional delivery in the public health system.

Background:

Over a long time the system has got used to not providing these services. Starting up this work requires special steps to break the inertia. Not only is this a lot of work, it is often more advantageous and lucrative to the staff to refer deliveries to private practitioners. Earlier there was a night duty allowance but it was impossible to monitor whether the delivery was really done in the night. Though it did lead to some increase in number of deliveries done, it was not much, and one seemed to be paying extra for what was a routine minimum service requirement .

Description:

An order was passed by the Madhya Pradesh Department of Health that for any delivery over 200 in a year in any facility, each delivery would be given an incentive of Rs 330 which would be divided between the doctor, the nurse and the sweeper. The funds were from RCH-II and the Rogi Kalyan Samiti could monitor it in addition to routine channels of monitoring. This is newly introduced (in 2005-06) – but has had an immediate impact on increasing institutional delivery. Since before the incentive starts one has to verify that the 200 deliveries has been reached, the minimum levels of service delivery of that particular service are guaranteed.

4. BIRTH COMPANION SCHEME TO PROMOTE INSTITUTIONAL DELIVERY:

Objective:

To promote acceptance of institutional delivery.
To make experience of institutional delivery and child birth less stressful

Background:

Relatives were **banned** from maternity wards in Government institutions across the State of Tamil Nadu, leaving women to deliver without any support from someone they knew.

Studies have shown that allowing a woman to be comforted, reassured and praised during childbirth has many benefits including the following:

i) Shorter labour
ii) Less pain medication
iii) Fewer medical procedures
iv) Decreased rates of Caesarean Section
v) Increased satisfaction with birthing experience and less postpartum depression.
vi) Early initiation and continuation of breast feeding.
viii) Promotion of institutional delivery.

Description:

After a pilot scheme in two Emergency Obstetric Care Centres in Corporation of Chennai, a Government Order was passed in July 2004 allowing one female companion to be present in the labour ward with the expectant mother in all Government hospitals.

The birth companion must have:

i) undergone labour herself
ii) agreed to wear clean clothes, an identification tag and to attend the whole labour
iii) agreed not to interfere in the work of the hospital staff and the treatment procedures or with any other woman undergoing labour in the same ward
iv) be free of communicable diseases.

The order applies to all teaching hospitals, district and sub-district hospitals in the State. The practice was already being informally carried out in Primary Health Centres and Health Sub Centres and this is to be continued.

A one-day training/sensitisation programme was carried out at each hospital for the labour ward staff nurse and doctors in an effort to overcome opposition to the scheme. The pilot scheme found that most opposition was overcome once the doctors and nurses saw the benefits for themselves.

Results:

Not yet evaluated, but nodal officers have been appointed at each institution to monitor the scheme, looking at the number of Caesarean sections and the number of new mothers breastfeeding. They will

also conduct exit polls of mothers to gauge satisfaction with the service. The nodal officers will meet each year to report on the scheme's progress.

International studies have shown that a birth companion can reduce the number of Caesarean sections and pain control needed.

The programme is extremely low in cost. It has already been implemented successfully for four years at the CMC Hospital, Vellore. It just needs a government order and some serious sensitization to break down the reluctance in allowing an attendant a hospital bed.

4. SPECIAL SHORT TERM COURSE FOR CREATING SPECIALIST SKILLS-(ALSO KNOWN AS MULTI-SKILLING)

Chhattisgarh Experience in Multi-skilling for Medical officers

Critical gap in number of specialists was identified as the constraint for the operationalization of FRUs in 32 blocks which had been taken up under the sector investment programme .

There were only 14 Anaesthetists and 34 gynecologists available in the state in the public sector and these were required to staff the 16 district and 12 Civil Hospitals. Even then, 5 district hospitals and most district hospitals could not get either specialist. In this scenario it was impossible to provide specialists for 32 more FRUs. The state produces only 4 specialists – two degrees and two diplomas in a year and only one or two of them join the public sector. The state tried all-India advertisements for contractual appointments but only 5 candidates were ready and that too for placement near cities.

Thus short term courses were designed to enable the Medical Officers to upgrade their existing skills to specialized skills in "Emergency Obstetric Anaesthesia", "Essential Obstetric Care as well as Comprehensive Emergency Obstetric Care" to ensure that the management of most emergencies could be managed at the FRU. In the first round, with the Government of India's help, a batch of medical officers were sent to AIIMS. The course started off well but due to internal problems over which the state could have no control it could not be completed as desired. Moreover the level of technology in use there was quite high and returning trainees could not relate it to their work environments.

A workshop was then held to finalize the **duration** and **syllabus** of the course and make a plan to develop the course material. It was agreed that the duration of the course would be 4 months which could be extended for two months depending on the trainer's feedback and the trainees acquired competencies and level of confidence.

Three institutions were identified who could provide the training and the cooperation, indeed active participation, of the faculty was secured. The three institutions were:

- Pt. J.N.M. Medical College, Raipur
- Chhattisgarh Institute of Medical Sciences, Bilaspur
- J. L. N. Hospital and Research centre (Sector 9 Hospital), Bhilai

The course were developed by AIIMS for the pilot programme in Emergency Obstetric Anaesthesia was adapted and published. The course material for emergency obstetrics care was taken from the WHO publication on emergency obstetrics care "Managing Complications in Pregnancy and Childbirth" (from the site www.reproductivehealth.org) and limited copies were printed for the course.

The Medical Officers were trained in two Batches in the three institutions. About 5 Medical Officers were posted in each institution in one training batch. A total of 52 candidates were trained. 25 were trained in Emergency Obstetrics and 27 in Emergency Anaesthesia.

Trainers were provided with the guidelines. A log book was provided for the trainees to keep a record of the number of cases they assisted and performed under supervision and independently. This helped in monitoring this training.

The course was of four months duration. After evaluation, for some trainees the course was extended to 6 months. Some trainees went back to their own district hospitals for further practice.

The training coordinator visited the institutions every month for supportive supervision. This comprised of feedback from the Trainers and Trainees as well as problem solving. Formative evaluation and discussion on the questions paper was an essential part of this visit. The trainees were motivated to learn better so that they could perform as expected in their CHCs.

The first batch was enthusiastic and learnt considerably well. However, inspite of lower motivational levels, the knowledge and skills attained by the second batch were much better than that of first batch due to constant supportive supervision and better training rigor.

The data and feedback available from the FRUs reflects that there has been considerable increase in the level of confidence among the Medical Officers who have undergone the short term courses. Caesarian section has started in five places out of 42 and complications of pregnancies are managed in 15 places with good outcomes. Another 4 centers could not start up because the multiskilled persons were shifted to the district hospitals which did not have specialists either. Thus the total number of successful start up can be taken as 17 plus 4 – or 21 centers for a high quality of basic emergency obstetric care, and 5

centers for comprehensive obstetric care as defined earlier. It is expected that with continued and enhanced support of the senior district officials, up to 15 centres would start comprehensive obstetric emergency care.

The greatest difficulties in starting up were constant discouragement and premature declarations of programme failure. Thus, it would be reported repeatedly that no one trained is confident of doing the surgeries when in some cases training had been weak and in others support had been very weak. However these are to be expected for any new venture in an age old system. The challenge is also to find an institutional framework for providing internal advocacy and push for newer initiatives of this sort.

Question 1: Why do we need these courses?

Lack of specialists in the CHCs and in district hospitals is a major constraint in delivering the desired emergency obstetric care services needed to save thousands of women and children's lives. Most of the specialists want to work in the cities and would rather leave government service than accept a posting in remote areas. The number of specialists passing out every year is insufficient in most northern states to fill the vacancies in the existing CHCs. For example in the state of Chhattisgarh only two degree and four diplomas in anesthesia become available every year and only one or two of them join government service whereas the state's requirement is for at least 150 anesthetists. It is often very difficult to find specialists even for district hospitals of more distant and less developed districts. Getting specialists on contractual appointment at higher salaries or as visiting consultants has been tried but is able to contribute only marginally. The demand for specialist services can not be met by Public Private Partnerships as there are few institutions which can provide such services, especially in those areas where the public sector is itself not able to offer these services.

Thus, often the only option before the public health sector is to train its medical officers to acquire these specialist skills. This necessitates starting a short term course for the Medical Officers posted in these CHCs. This will enable them to gain skills and competencies to deliver quality obstetric care and manage complications of pregnancy medically as well as surgically. Skills in anesthesia are also necessary for managing obstetrical emergencies. Neonatal outcome is also interlinked with the outcome of the mother so neonatal mortality reduction also becomes part of this venture.

Areas where multi-skilling is needed as a priority

- Medical and surgical skills in EmOC
- Anaesthetic skills in Obstetric anaesthesia
- Routine and Emergency Neonatal care

We note that once these capacities are created in a CHC, its ability to not only manage obstetric emergencies but a large number of other surgical and medical emergencies expands greatly; Cesarean sections is one of the more challenging of surgical procedures; the infrastructure and equipment needed for many first referral surgeries and medical emergencies is less than what Cesarean section takes and the skills needed are easier to acquire.

Question 2: What is the duration of the course?

The minimum duration of the course is 4 months/ 18 weeks. This may be extended to 6 months depending on the trainee's evaluation and level of confidence and trainer's feedback.

Question 3: What is the legal position of the course?

There is legally no requirement that a postgraduate qualification is necessary before these skills are utilized. An MBBS qualification is adequate, provided training to perform these procedures is adequate. The course in anaesthesia is approved by the Department of Health and Family Welfare of the Government of India. The course in upgrading skills in Comprehensive Emergency Obstetric Care has been successfully piloted in Chhattisgarh and a number of other states where a number of doctors have been trained in this.

Federation of Obstetric & Gynaecological Societies of India (FOGSI) is preparing Curriculum for this for GOI which includes Basic Emergency Obstetric Care and Caesarian Section, and this would provide professional sanction for this course.

Basic Emergency Obstetric Care is now included in the undergraduate curriculum of the medical college and this also needs follow up to ensure that it is happening.

Question 4: How to establish legal safety for the trained doctors?

There was general acceptance that the Consumer Protection Act (CPA) issues do not affect trained graduates and these issues are the same that would affect any registered medical practitioner.

Trained doctors may also ensure that while taking consent before surgery the emergency nature of the operation is established (imminent and life saving)- and so that it is clear that where cases are elective and able to afford and access a qualified specialist they are given the option to do so. Thus even though C-section is far more skill requiring than laparoscopic sterilisation surgery , since the latter is elective and in a healthy woman- this multi-skilling approach would not be acceptable.

However the State Government may take steps to indemnify or insure the trained medical officers against any court proceedings/civil suits if arising out of Emergency Obstetric care at the FRU. So far this has not been done – nor been essential in any place- but doing this may give confidence to key district officers to support trained doctors.

Question 5: What is the professional understanding and how to create professional understanding?

In some states local Chapters of professional bodies like FOGSI or Indian Society of Anaesthetists (ISA) may be reluctant to support such courses due to concern that it would lower quality and put lives at risk. Also they are worried about trivializing the amount of learning it takes to acquire such a skill. Many professionals within the department may also have such hesitation. We need to explain the following:

i. That as it stands today, hundreds of lives are being lost for lack of availability of these skills. Some skills present in these areas are preferable to no skills at all. Alternatives like conscripting specialists including those in private practice to serve for five years, wherever they are asked to serve have not proven practical.
ii. That WHO, which is the leading professional body internationally, and Government of India have both approved these courses and even brought out guidebooks for the same.

WHO recommendation for the doctors as Skilled Birth Attendants is – (Action points for professional association, From WHO Skilled Attendants at birth)

"Provide specialist training for junior colleagues and other health care professionals through locally designed specialist courses, such as Advances in Labour and Risk Management (ALARM) or Advanced Life Support in Obstetrics (ALSO)"

iii. That regular postgraduate course teach a wide number of surgeries and procedures in their three year terms, which could be reduced to the needs of the CHC and PHC. Thus key life saving skills can be acquired in less time.

iv. That quality would be built into the course by enforcing evaluation and ensuring that the trainees complete a minimum number of cases under supervision.

v. That once specialists become available this training will be withdrawn. Qualified specialists when they join would find such trainees valuable assistants at all times and available for backup arrangements when they go on vacation/leave etc.

Question 6: How to choose the venue?

Medical Colleges (Preferably MCI recognized) and Hospitals recognized for Conducting Diplomat of National Board examination (DNB) and post graduate training (PG) will be preferred. The identification of training centres may be done jointly by the State and Central Government.

These institutes should have:

i. Adequate number of deliveries and sufficient load of emergencies including Caesarian section.

ii. Necessary equipment and mannequins to teach.

iii. Adequate Staff for teaching. Results appear to be better when these trainees have less postgraduate students to contend with for the few cases and for faculty time.

Question 7: How to select the trainees?

The trainees should be:

i. The medical officers posted in the CHCs which are selected to be upgraded as FRUs.

ii. Willing to undergo the course and are motivated to come back to work in the same CHC.

iii. According to the Government of India guidelines the candidate should be employed for 5 years and should have at least 10 years remaining for retirement. (But in the present scenario with limited human resources if there is a medical officer with proven motivation, the rules can be made flexible).

iv. Trainees with already existing surgical skills (surgeon, orthopaedician. ENT etc) are likely to learn C-section earlier and maybe preferred for obstetrics courses .
v. Women trainees may be also be preferred for learning the obstetrics course because of better patient acceptance.

Question 8: How to make training effective?

i. Practical work must be insisted upon and recorded in the log books which should be checked regularly.
ii. The lectures and presentations should be followed by discussions and supervised clinical training.
iii. Supportive monitoring visits every month by the state coordinator. During such visits there would be feedback from the trainers and trainees and then efforts to improve the quality of the training.
iv. Monthly formative evaluation of the trainees should be done which should be followed by discussion on the questions and answers on the same topics.
v. A summative evaluation is also to be insisted upon and will be needed for certification.
vi. The new guidelines from GOI are now recommending three tier system of evaluation.

Question 9: From where would the funds be available?

Funds are available from the RCH II flexipool or from the NRHM budget head of operationalising FRUs. The revised budget can be made according to the GOI Guidelines.

Question 10: Do the trainees start doing CS immediately after finishing the course.

This depends on many factors like the MO's level of confidence and support from the district authorities. Some feel very confident and are supported by the senior management of the districts and start doing CS immediately. Some have confidence but may be discouraged by senior officers, perhaps to forestall pressure to make all CHCs into functional FRUs .

Most of the Medical Officers start providing Basic Emergency Obstetric Care soon after finishing the course. Medical interventions for managing the complications of pregnancy like eclampsia, APH, PPH with good outcome should also be considered achievements. It is expected that in these places Caesarian section would start soon with some support.

Some trainees would not have done enough cases during training and therefore never start up later. It is important to identify this sub-set.

All medical officers who have been so trained must be required to conduct at least one surgery every month on an elective basis, at the district hospital or nearby tertiary care center, so that the skill acquired is retained. Even being the first assistant is useful.

Question 11: How to support the trainees to start CS?

If the MOs are confident but need some support initially the district specialists or the specialist posted in the nearby CHC can go to the FRU and provide necessary support. If the MOs lack confidence they should practice in the district hospital for some days and go back to their respective FRUs and start performing with elective cases or the MOs could be posted once a week on operation days in the district hospital.

Question 12: What are the systemic impediments to starting up CS?

The general understanding in the system is that surgical procedures are to be performed by specialists only. This is part of professional reluctance discussed earlier and leads to low acceptability of the MBBS medical officer's medical management and surgical skills. We need to point out that a number of mission hospitals and other private sector hospitals, especially upto one decade ago, would have MBBS doctors doing these surgeries. Also, in so many private clinics anesthesia is given by trained MBBS doctors, nurses or even less qualified persons who have been trained for it. So there is no need to hesitate once other alternatives for filling up the posts have shown that there are indeed no specialists available.

Question 13: How to integrate with safe MTP, Sterilization (Conventional tubectomy(CTT), Non Scalpel Vasectomy (NSVT)) and RTI services?

Other services like sterilisation, management of reproductive infections and medical terminations of pregnancy are also a part of services to be delivered at the FRUs. For

this the training curriculum can be further revised to increase the knowledge and skills in these areas. It makes sense to overlap training in this with the short term courses in emergency obstetrics. One does not need more days, as opportunities for surgical practice do not come together. Also most of these cases would be elective. A further two weeks may however be justified by invoking this and this would be useful to improve the course outcomes.

Question 14: Can this approach be used for the district hospital?

Ideally district hospitals need to provide a wide range of gynecological and surgical services of which C-section is only a small part. So they need specialists. However admitting that even for district hospitals one is unable to find specialists, this approach can be used for the district hospitals also. Even where there is only one specialist, those trained thus are valuable assistants at all times and provide backup arrangements when specialists are on leave or unavailable.

Review Questions

1. Describe the 'three delays' known to contribute to maternal mortality and the specific factors that affect these in your area.
2. How can Verbal Autopsy be best used as a tool to improve maternal mortality?
3. What system could be set up in your area to do verbal autopsies, from identification of mortality to analysis and feedback?
4. what challenges can be anticipated in running a successful 'multi-skilling' programme to make FRUs functional?
5. what are the possible benefits of multi-skilling?
6. what are the ways of providing such 'multi-skilled' doctors all the support they need to practice the skills they have learnt?

Application Questions

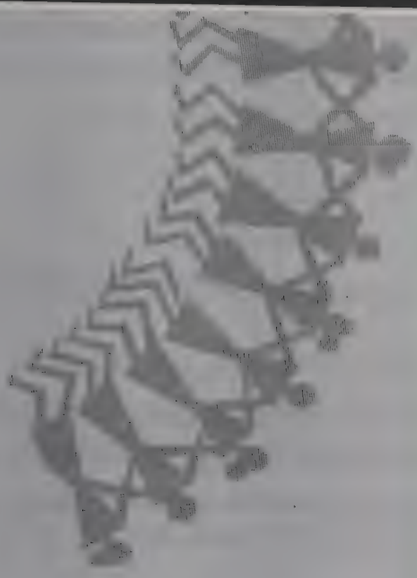
1. in your opinion, are there other health care functionaries that should be multi-skilled / upgraded to improve the over all situation of services? In which situations would this apply?

Project Assignment

1. Get at least one maternal death in the community investigated by doing a Verbal Autopsy. If possible get another hospital death investigated.
2. Draw up a plan for increasing institutional delivery in your district.
3. Document case studies of a doctor either from government or voluntary sector who have acquired specialist skills without formal specialization and are utilizing multi skills.

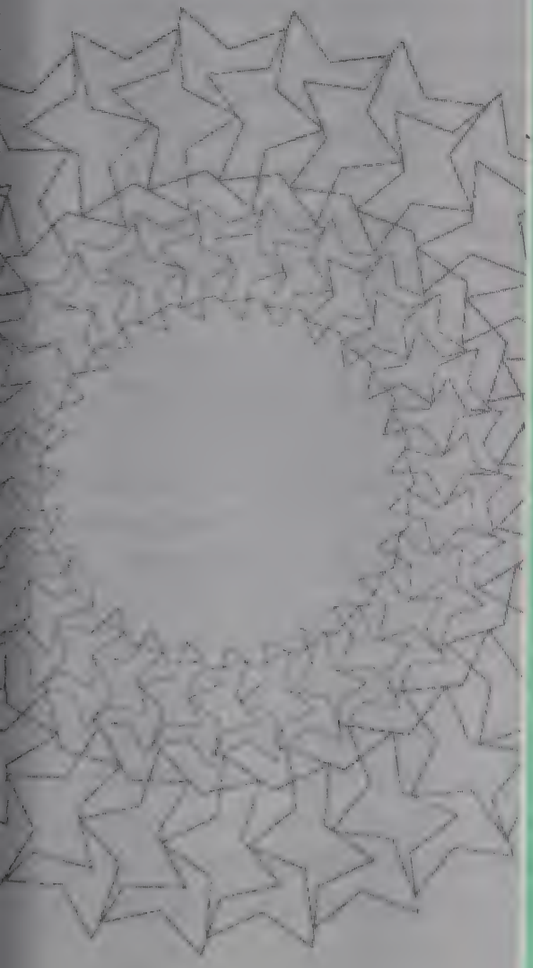
Lesson FIVE

Contemporary Debates



In this lesson we shall discuss:

- the contemporary debates over the issue of dai training
- the contemporary debates over the issue of 'two child norm' and other disincentives used for 'family welfare'



DAI TRAINING:

Traditional Birth Attendant (*Dai*) training has been a central part of maternal mortality reduction strategies in the past. However it is almost out of the agenda now. There are many reasons advanced for this – but there are many who argue for retaining it in the agenda, even if not centrally.

The reasons advanced for dropping the dai training agenda.

- There is considerable evidence that training of dais has made no impact on reduction of maternal mortality.

- One reason for this is that often the dai is called in to assist at child birth only for cutting the cord and for disposing off the placenta. All the other assistance, before, during and after is provided by the other relatives. This is related to caste factors also. These limitations give the dai little space to intervene in all aspects of child birth assistance.

- Another reason advanced is that the levels of skills that it is possible to provide to a dai – often a woman with low literacy - is very inadequate compared to the skills needed for managing complications that lead to saving maternal lives. Thus skills like making and using a partogram (this is a chart for monitoring progress of labour), giving injectables, are life saving but it is not possible to train dais- who are mostly illiterate – to acquire this level of skill.

- the information and practices that a dai 'inherits' traditionally may be in direct contradiction to the training she would recieve as per allopathic norms and it is often difficult to convince her to change such practices.

However those who would retain dai training put forth the following reasons:

- Access to skilled birth attendants is far from universal. There are many places where the dai is the only birth attendant available, especially for the poor. Even in a place like Tamil Nadu where institutional delivery is over 80% the 20% who are left out are the poorest and often since the dai system is breaking down and there is no trained dai they are left in the management of untrained and ill experienced relatives.

- The dai training does make a difference , especially in simpler aspects like birth hygiene – the five cleans— which contributes to reducing maternal and neo natal infections. These may not show up at statistical levels and anyway maternal mortality ratios are so difficult to estimate- but they do provide for some immediate relief which should not be denied . We know that in many areas cutting the cord with an unsterile knife is still a major problem. How can we then not provide

training for those who are being called in to do that. Studies limited to such groups may bring out their effectiveness better.

- The outcomes of dai training are also low because the health system as it is today is not equipped or skilled enough to act as trainers for a community based person with low literacy. Dais also bring along considerable traditional knowledge and they come from families which practice indigenous medical care and by failing to incorporate these elements into training we fail to build on their existing skills. It is really therefore an issue of training quality – not of the desirability of dai training itself.

- Though the dais role may be restricted to cutting the cord in more well to do or upper caste groups, there is potentially no such restriction in the more marginalized groups and investing in training her would help reach out better care to both mother and the new born.

But many public health experts remain unconvinced. They would counter:

- Potentially it is possible to build up the requisite skills in dais. However, it would not be as cost and effort effective as other options; such good quality training is expensive. It would be better to invest in increasing the number of persons – midwives, nurses or doctors — providing skilled assistance which itself has not been easy If we make it mandatory for any training for skilled assistance at birth training to include supervised practical experience in child birth management , then the number of training centers available are limited even for training nurses and midwives . It is in most such states impossible for these limited centers that can provide practical experience in child birth management to be able to train large numbers of dais as well.

- It is true that the poorest are not reaching skilled assistance, but the solution to that lies in affirmative action measures – schemes like Janini Suraksha Yojana and other forms of demand side financing by which they can reach good quality care. It is unacceptable for us to accept that the poorest will be left to poor quality care and skilled assistance would be largely for those who can afford it.

But in reply those who still insist on the importance of dai training would argue that

- skilled assistance need not be posed against dai training. There are many states and within states many areas where skilled assistance at birth is less than 50%. There is going to be no sudden jump in these figures. So one needs to persist with dai training, perhaps mapping out and prioritizing areas where skilled assistance is not reaching.

- They would also probably argue for building up teams specializing in dai training – perhaps the same teams that would also look at ASHA training.

THE TWO CHILD NORM AND OTHER DISINCENTIVES FOR FAMILY WELFARE /FAMILY PLANNING/ POPULATION STABILIZATION:

It is a popular notion that people, specially poor people, must be discouraged from having large familie so that they can look after their childen better within their resources. This thinking has informed a numbe of 'population policies' at state and central level and the two child norm still applies to many welfa schemes. In some states, it also was made to apply to eligibility for panchayat elections, eligibility f ration cards, loans, maternity entitlements and promotions.

However, the reasons for poor people to have children are complex and manifold and must be we understood before formulating and applying strategies for reduction in family size. In the absence financial and land assets 'an extra pair of hands' is the only asset for many poor people. Also for a po family which has no savings, and no pension schemes children are the only social security for their o age and their illness. They also know by experience that many of their children die before reachi adulthood. Many families,especially women would like to limit their family size but are not empowered do so. One major contributor to increased family size is the son preference related to patriarchal norm Information about family planning services is lacking as are good quality services themselves. We mu remember that the 'unmet need' for family planning services continues to be high. Some cultural religious beliefs may also prevent the use of contraceptives.

In this context, and after much study and debate, there is consensus amongst most experts that 'th best contraception is development'. This is reflected in the fact that India has signed various internation treatises on population control that speak against the use of disincentives. There is evidence th disincentives and coercive measures,, even something as drastic as compulsory sterilisation, did not any time bring down the population rate. On the other hand there is consistent evidence that when w are able to assure better child survival, good literacy levels specially amongst women and easily availab good quality services for family planning, people will spontaneously resort to smaller families witho the use of coercion in any manner. For example, Kerala, the first state to achieve fertility rates of und 2.1 in India never even had a special population policy.Its success is related to its literacy level, lo Infant Mortality Rates and accessible public health services.

In the absence of these facilities and entitlements, coercive policies are unlikely to contribute population control. If anything, they only serve to further disempower the poor and allow y another instrument to deny them their rights. It is most often the dalit and then the backwa caste woman who with great difficulty – individually and historically – have got into electe office who would be dismissed. Such policies also promote further drops in sex ratio; if only on or two children are 'permitted', families would, in patriarchal society, try to ensure that they a sons.

While speaking of rights, one of the strongest arguments against the 'two child norm' is the violation the rights of the child on grounds of birth order because her parents are penalized on some manner

other. For example, if a poor woman does not get maternity support for her third child, the child is likely to be lower birth weight, not be exclusively breast fed and poorly nourished whereas she really has no choice in her own birth order!

It is these strong arguments that are slowly but surely causing a reversal in the use of coercion and disincentives from population policies. These were removed from the draft of the National Population Policy as a result of public pressure. Many states like Himachal Pradesh have now repealed previous laws placing two child norm restrictions upon panchayat elections since it was proved that these marginalise the poorest and the dalit women in particular.

Most recently, the two child norm has been removed from the Janani Suraksha Yojana (for BPL women. Much of these gains reflect the impact of pressure by a well informed civil society and the use of sustained, well worked out, logical advocacy.

Review Questions

1. Discuss the main arguments for and against dai training.
2. Given this debate, what is your opinion on dai training?
3. Which development indices would you like to improve to promote small family size in your district and how?
4. What services and schemes would you like to improve / use to promote family planning in your area?

Application Questions

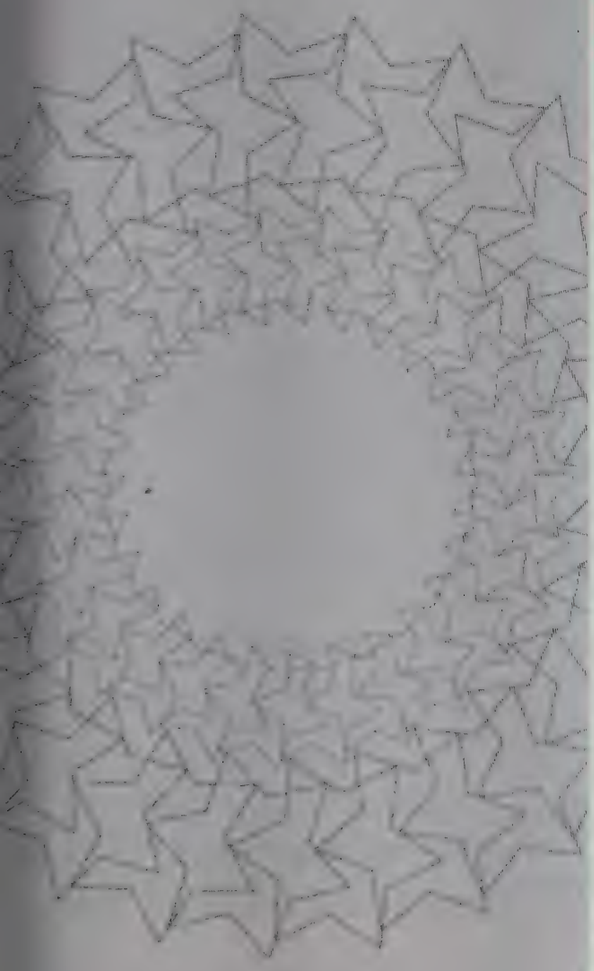
1. What role are dais playing in your district? How is this relevant looking at the following data-
   - Percentage of Institutional deliveries
   - Availability Skilled birth attendance
   - Availability of Trained dais
   - Human resource (Drs, ANMs) status quo (sanctioned posts and vacancies etc)
   - Access to health institutions
2. Does this change your opinion on dai training or justify it?

Project Assignment

1. Interview one dai and one family where a delivery has been done by a dai. Describe with a view to identifying advantages and risks.
2. Ask some ANMs how many persons were willing for sterilisation last year who could not be operated upon? How many of such women got pregnant while "on the queue?"

Lesson SIX

Behaviour Change Communication Strategies for Reduction of Maternal Mort



In this lesson we shall discuss:

- How to plan a BCC strategy for

  a) Increased Institutional delivery
  b) Promote effective Antenatal Care.
  c) Prevent Child and Early marriage in the community

- The contributions that ASHA can make towards reducing MMR

- Monitoring and support mechanisms that will be needed by ASHA in her efforts to reduce MMR

BEHAVIOUR CHANGE COMMUNICATION

Behavior Change Communication or BCC, is "a process of working with individuals, communities and societies to develop communication strategies to promote positive behaviors which are appropriate to their settings; AND providing a supportive environment which will enable people to initiate and sustain positive behaviors." We know that providing people with information is important but not necessarily enough to bring about behavior change. The behaviour change must also be within the realms of the practical realities of the concerned person's life. In other words, behavior change also requires a supportive environment. Community and society must provide the supportive environment necessary for behavior change.

Most of such activities were earlier discussed as IEC . This change of term reflects a better understanding of what is needed to promote behavioural change. This is discussed in detail in the separate book on BCC (book 5).

We learn below how to make a BCC plan to address reduction of maternal mortality.

Below is a framework in which one can plan BCC work- a framework that not only helps plan for but also evaluate the effectiveness of BCC activity. This framework is applied to some key areas of maternal health.

Feel free to change the details to suit your needs but do try to use the framework as a tool of planning and of evaluation of BCC activity.

GOAL : INCREASED INSTITUTIONAL DELIVERY

AUDIENCES : FAMILIES OF PREGNANT WOMEN
PANCHAYAT MEMBERS

Behaviour change desired	Key determinant factors	Activities
▸ Mothers, especially those at high risk, seek institutional delivery where there is an acceptable affordable facility available.	▸ Information to family on reasons for institutional delivery and on the nearest accessible affordable facility. ▸ Motivation to family and pregnant woman to go there, especially if high risk.	▸ ASHAs, AWWs and ANMs between them ensure that pregnant woman and family counselled. ▸ Inter-personal communication (IPC) using printed flip charts/flash cards. Special attention to high risk women. ▸ Locale specific success and adverse case stories publicized through gram panchayats and at all local events and health melas.

GOAL : INCREASED INSTITUTIONAL DELIVERY

AUDIENCES : FAMILIES OF PREGNANT WOMEN

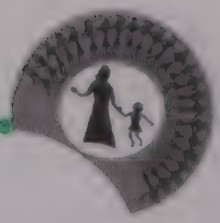
PANCHAYAT MEMBERS

Behaviour change desired	Key determinant factors	Activities
▸ Families of pregnant women esp the husband / elders discuss and plan and make the necessary arrangements for the delivery as soon as the risk is discovered.	▸ Skill needed to plan for how to organise transport at the moment of need and access relevant govt. schemes / facilities. ▸ Enabling environment that makes such behaviour the desired norm. ▸ Availability of the services being prescribed/promoted/ promised.	▸ Use of kalajathas to emphasise the number of maternal deaths in the district and create environment for change. ▸ ASHAs trained and supported to help such families to plan – using all available resource including JSY etc. ▸ Radio jingles and TV slots and folk art used to make this behaviour the status norm- we are ready to change. ▸ Stone pillars at public place at the hamlet and village level informing about the available and functional institutional delivery facility .
Indicators	**Indicators**	**Indicators**
▸ Number of women seeking institutional delivery where there is affordable, accessible service available compared to previous year/ last three months. ▸ Micro-plans made for pregnant women in last trimester with ASHA's help.	▸ Pregnant women able to tell whether they are at risk and recall the risk, where is the facility and what is the scheme. ▸ Husband/ Elders in family of pregnant woman able to tell whether the woman is at risk, the nearest available facility, and whether she is eligible for help under any of the schemes.	▸ Communication material available with ASHAs. ▸ Samples show that they have been used at hamlet level. ▸ Case studies pamphlets compiled and distributed on time. ▸ Number of kalajatha programme given and audience attendance at each. ▸ Radio jingles broadcast and TV slot payments and cassette of the above freely distributed for dissemination. ▸ Stone pillars with information erected at the stipulated place.

GOAL : **EFFECTIVE ANC**

AUDIENCES: **ALL FAMILIES WITH PREGNANT WOMEN OR ELIGIBLE COUPLES**
GRAM PANCHAYAT
SERVICE PROVIDERS AND HEALTH VOLUNTEERS

Behaviour change desired	Key determinant factors	Activities
▸ Seek not only an antenatal check up but insist on a complete and good quality antenatal check up.	▸ Recognize all 8 elements of a complete ANC and the reasons for each (early registration, abdominal examination, weight record, blood and urine examination, BP measurement, iron and folic acid tablets and TT injections). ▸ Motivation to co-ordinate with AWW/ASHA and ANM so as to access these services. ▸ Effective supervision of quality and access by community and gram panchayat.	▸ Small scale formative research on current practices and barriers to the recommended behaviour. ▸ Persuade local sirha/ gunia to counsel the families of pregnant women. ▸ ASHAs/ AWWs and ANMs between them visit all pregnant women. ▸ Special meetings with women and approach through SHGs and gramsabha meetings for these messages. ▸ Special carry home print material announcing what is an ANC. ▸ Sensitization programme for panchayat leaders.
Indicators	**Indicators**	**Indicators**
▸ No. of pregnant women who had complete ANC compared to previous year/ quarter's figure	▸ Service providers, volunteers and pregnant women and their husband/ family elders able to recall with reason the 8 elements of ANC. ▸ No. who approve that these services are beneficial. ▸ Able to tell where these services can be accessed	▸ No. of visit during which the above messages were discussed. ▸ No. of meetings of SHGs held to discuss the above. ▸ Content and quality of material produced and ▸ No. of sensitization programmes for pannchayat reps.



GOAL : **CHILD / EARLY MARRIAGE**

AUDIENCES: **PARENTS & GRAND-PARENTS OF ADOLESCENT GIRLS** (especially school drop-outs from class 5th to 11th) **JAATEE PANCHAYAT MEMBERS, RELIGIOUS HEADS, CHADEEDAARS, ETC.** (especially amongst patel, kurmi, sahu communities)

Behaviour change desired	Key determinant factors	Activities
▸ Parents of young girls do not seek to fix match for daughters below 18 years. ▸ Parents of young boys do not entertain proposals for marriage for sons below 21 years. ▸ Girls are not married off before completing 18 years and boys not before 21.	▸ Learn about the rationale from the community's perspective. ▸ Awareness on the disadvantages of early marriage for girls and also for such a couple and their children. ▸ Aware of reasons for fixing the legal age of marriage. ▸ Skill to withstand family, neighbourhood and community pressure. ▸ Motivation through recognition as progressive and responsible parents. ▸ Encouragement for the girls to pursue school education/ a vocational course/ skill building to participate in family or other occupation. ▸ Information about schemes to incentivise education for girl children. ▸ Motivation to parents to nurture and protect instead of punishing by marrying off the children at a young age.	▸ FGDs with different population groups to understand the reasons and discuss solutions. ▸ Use the above in positioning the messages. ▸ Population group based shows of local art forms particularly bharthari / pandwani. ▸ Inspirational story in the school text-book. ▸ Advocacy through SHGs esp. at the time considered auspicious for fixing marriages and post-harvest. ▸ Inclusion in the TV/ Radio soap. ▸ Sensitization for Jaatee panchayat members/ leaders and recruiting champions. ▸ Posters at community halls, panchayats etc. ▸ Discussions and debates – "Swasthya ke sawaal aur aapke khayaal". ▸ Inter-sectoral activities with DWCD.

GOAL : CHILD / EARLY MARRIAGE

AUDIENCES: PARENTS AND GRAND PARENTS OF ADOLESCENT GIRLS ESPECIALLY SCHOOL DROP OUTS FROM CLASS 5TH TO 11TH JAATEE PANCHAYAT MEMBERS, RELIGIOUS HEADS, CHADEEDAARS, ETC. (especially amongst patel, kurmi, sahu communities)

Behaviour change desired	Key determinant factors	Activities
Indicators	**Indicators**	**Indicators**
▸ Reduction in number of marriages below 18 years of age compared to last year/ season.	▸ Able to list different disadvantages of early marriage. ▸ Approve that it is detrimental. ▸ Able to negotiate with family, neighbourhood and community at large to withstand the pressure for early marriage of self or in the family.	▸ Messages in folk art performances. ▸ Inclusion of story in text books through SCERT. ▸ Timely use of posters at stipulated places. ▸ No. and timing of sammelans of Jaatee panchayats where the issue was discussed. ▸ Incorporation of message in radio/ TV soap. ▸ Meetings and joint planning with DWCD.

Note : The above plan is specific to a southern state of Chhattisgarh state where stone pillars are in use as local communication media. Given here as an example of culturally appropriate use of media.

The above tables with the indicators helps the district plan for IEC and provided measures to see whether it was effective. We could make similar plan for promotion of 5 cleans at delivery, and the need for skilled assistance at birth, etc.

HOW DOES ASHA CONTRIBUTE TO PROMOTING BEHAVIOURS THAT REDUCE MATERNAL MORTALITY?

Much is expected from the newly emerging cadre called ASHA.

But what is realistic?

What definition of work role fits the spirit of her role?

What is feasible for her to do?

What is it we can monitor and support vis-à-vis this large scale state-wide system?

Below are some tentative suggestions for the role of ASHA in reducing maternal mortality:

a. Most important task is the inter-personal communication – the interaction with the entire family to ensure that the pregnant woman gets adequate support from her family, especially food and rest,

good quality ante-natal care; and that the best possible assistance is secured for delivery. Ideally the ASHA should not only be trained, but equipped with a communication kit for this purpose

b. Second is to bring issues of maternal health on to local agendas of social and political action so that social determinants like age of marriage, spacing of children, access to nutrition etc are positively and collectively addressed. This also needs organisation and collective action by women and increased participation of women in decision making. The formation of women's health committees, the involvement of self – help groups, the emergence of ASHA as a local activist articulating women's needs all contribute towards this end.

c. Facilitate delivery of antenatal care services by finding out when the ANMs visit is due and ensuring that the pregnant woman goes to the venue at the proper time with adequate information as to all that should be done during the check-up. Coordinate with ANM and AWW for this.

d. Identify the vulnerable families – pregnant women who are the sole earning members, women without family support, handicapped women, migrant women, women from marginalised communities, women below the poverty line, underage women etc —and make special efforts to see that these women access both antenatal services and skilled assistance at birth and post partum care.

e. Meet the family in the last trimester and make a concrete plan of how the pregnant woman would go for the nearest functional institutional delivery. How would they access transport, how much it would cost, how they could meet the cost , who would accompany her etc. If JSY is functional in that area they could add that into their calculations but let the plan not be dependent on it. If she cannot/ will not choose institutional delivery ensure promotion of the next best option that she would be ready for.

f. Negotiate with decision makers, those who have a vehicle, hospital authorities, ANMs etc so that a clear emergency referral transport option for that village emerges.

Monitoring and Supporting ASHA for this function:

In the monthly review meeting with ASHAs ask how many pregnant women are due to deliver in the coming month and whether they have received full ANC and how many of them have agreed to go for institutional delivery. Also ask whether they attended the immunisation and health day where ANM, AWW and ASHA have to meet for coordination and left out women and children are brought in.

If the monthly meeting is not held then it would be difficult to achieve this outcome.

Even if there is no system of holding such a meeting a local NGO can just decide to support the ASHA even without being asked to do so and by in service training and support ensure that the above activities of ASHA take place. (for more on role of ASHA see book 4)

Review questions

1. What are the different audiences for care at pregnancy as compared to messages against early age of marriage?
2. What are the behaviour changes expected at the family and community level to encourage them to utilize institutional service for delivery.
3. What are the key factors determining behaviours in accessing antenatal care and what activities address each of such factors?
4. What are the key factors determining early age of marriage and what activities are suggested to address each of these factors.
5. What are the various soles of ASHAs in reducing MMR?

Application Questions

a. How do billboards with messages help in behaviour change in these three areas?

b. To what extent do objective conditions allow for change of behaviours in these areas , even if people are convinced of the need to do so.

Project Assignment

1. What would be the key messages for a jingle for promoting the services of ASHA towards institutional delivery?
2. What are the traditional beliefs regarding pregnancy that are harmful and need to be addressed
3. Write the IEC / BCC component of your district plan for reduction of maternal mortality.

Lesson SEVEN

Janani Suraksha Yojna

In this lesson we shall discuss:

- **The objectives of the JSY scheme**
- **The programme details**
- **The bottle-necks this scheme is encountering.**
- **The concept of demand –side financing and how can we build on it.**

BACKGROUND

The commitment to reduce maternal mortality to 100 by 2012 has brought about many strategies for implementation. Promoting institutional deliveries is one of the important ones. Government of India under National Rural Health Mission has now launched Janani Suraksha Yojana by modifying the existing National Maternity Benefit Scheme (NMBS). The earlier NMBS was essentially a form of social assistance, especially as regards nutrition to pregnant women below the poverty line. The JSY sought to replace it with a scheme that provided an enhanced financial support to women having institutional deliveries. However, considering that the poverty line in India literally means having barely enough calories to eat, a poor woman when pregnant could do with nutritional assistance for its own sake. Therefore considerable sections in civil society and the Supreme Court were of the view that while the promotion of institutional delivery was important, the commitment to support the below poverty line pregnant woman could not be made conditional to institutional delivery. The current scheme is therefore a combination of these two needs- the need to support the poor woman in her pregnancy and the need to promote institutional delivery.

This is only a small step forward. The challenge is to build the kind of maternity entitlement that would enable a poor woman to stay off work and provide exclusive breast feeding and care to her new born infant for a period of six months. In that sense, though it replaces the NMBS, it does not claim to be a 'maternity benefits scheme' of the kind that is available to some women.

THE MAIN OUTCOMES EXPECTED FROM THIS SCHEME ARE :

- Increase in institutional deliveries, especially amongst the poor leading to decline on maternal and infant deaths.
- Better care in pregnancy , especially amongst the poor.
- Some financial support to pregnant women below the poverty line at the time of child-birth.
- Incentive to ASHAs leading to her sustained participation in community action needed to accelerate mother and child survival strategies

BENEFICIARIES

- All pregnant women belonging to the below poverty line (BPL) households – irrespective of age or number of births. (the earlier strictures on barring girls below 19 years and those with birth order above two have been removed.).
- All pregnant women who have institutional delivery in a government facility.

STRATEGY

The main strategy to achieve the envisaged objectives is to link the cash assistance under JSY to institutional delivery. Other than the fact that there is an additional cash incentive provided to women for coming to institutional delivery, the contact established with all pregnant women below the poverty line would facilitate:

- Early registration of the beneficiaries with the help of the village level health workers like ASHA or an equivalent worker;
- Facilitation of BPL status for deserving pregnant women
- Early identification of complicated cases;
- Providing at least three antenatal care checkups, and post delivery visits;
- Organizing appropriate referral and provide referral transport to the pregnant mother;
- Convergence with Integrated Child Development Services (ICDS) worker by way of involving Anganwadi worker (AWW) intensively;
- Devising as well as ensuring transparent and timely disbursement of the cash assistance to the mother and the incentive to the Accredited Social Health Activist (ASHA) or an equivalent worker with fund available with ANM.

THE STRATEGY FOR ITS FULL POTENTIAL ALSO REQUIRES THE FOLLOWING –

- Operationalization of 24/7 delivery services at PHC level to provide basic obstetric care,
- Operationalization of First Referral Units (FRUs) to provide the emergency obstetric care,
- Building partnerships through a process of recognition/accreditation with doctors, hospitals/nursing homes/clinics from the private sector specially in the rural areas to provide obstetric services to the JSY beneficiaries.

FEATURES

(a) **Categorisation of States:** States/UTs have been classified into two categories based on the institutional delivery rate. The 10 states namely the eight EAG states and the states of Assam and Jammu & Kashmir would constitute Low Performing States (LPS) and the rest High Performing States (HPS).

(b) **Enhanced Cash Assistance linked to Institutional Delivery:** The benefits under the scheme would be linked to availing of antenatal check ups by the pregnant women and getting the delivery conducted in health centres/ hospitals. While the beneficiaries will be encouraged to register themselves with the health workers at the sub centre/Anganwadi/Primary health centres for

availing of at least three antenatal checkups, post-natal care and neo-natal care, the disbursement of enhanced benefits under the scheme will be linked to institutional delivery.

The enhanced assistance for institutional delivery will be available as per the following rates.

Category of State	Rural area			Urban Area		
	Assistance Package to Mother .	Package for the ASHA (Rs.)+	Total (in Rs)	Assistance Package to mother in Rs.	Package for ASHA.	Total in Rs
Low Performing States	Rs. 700	600	1300	600	200	800
High Performing States	Rs. 700	Nil	700	----	----	----
• The package for ASHA or an equivalent worker provided in the scheme includes: • The Referral Transport Assistance for ASHA and the expectant woman to go to the nearest health centre, • The compensation for ASHA or an equivalent worker if she stays with the pregnant woman in the health centre for delivery,						

The above rates were subsequently revised. These revised rates are indicated below. In some states the new rates have not yet come into effect:

Category of State	Rural Area			Urban Area		
	Assistance Package to mother in Rs	Package for ASHA	Total (in Rs)	Assistance Package to mother in Rs.	Package for ASHA	Total (in Rs)
Low Performing State	1400	600	2000	1000	200	1200
High Performing State	700	Nil	700	600	Nil	600

(c) Incentive to the ASHA or an equivalent worker: ASHA or an equivalent worker should be working as a basic health provider in the village. Such workers functioning in the rural and urban areas would get an incentive in all the low performing states for providing certain essential support services.

The package for ASHA or an equivalent worker provided in the scheme includes:

- The Referral Transport Assistance for ASHA and the expectant woman t go to the nearest health centre,

- The compensation for ASHA or an equivalent worker if she stays with the pregnant woman in the health centre for delivery.
- The Assistance package to the ASHA or an equivalent worker is available only if she works and assists the pregnant women. It must however be ensured that the cash incentive to the ASHA should not be less than Rs.200/- per delivery case facilitated by her, to keep her sustained in the system.
- If any pregnant women does not take assistance of any accredited worker, perhaps because no ASHA is in position, she should be paid the sum total of both the packages.

(d) **Assistance for Caesarean Section** :FRUs/CHCs would provide emergency obstetric services. Where Government specialists are not available in a health institution, assistance up to Rs.1500 per case will be provided for hiring services of private experts to carry out the surgery either in a government medical facility or in private hospital, nursing home, etc.

(e) **Compensation payment for Tubectomy/Laparoscopy**: If hospitalization for delivery is followed immediately by Tubectomy/ laparoscopy, compensation money available under the family welfare scheme would also be paid to JSY beneficiary in the health centre as per the existing procedure followed for payment of compensation money.

(f) **Disbursement of cash assistance**: With a view to quicken the process of disbursement, the disbursing authority would arrange to provide an imprest money of Rs. 5000/-to every Auxiliary Nurse Midwife /health worker and authorize her to make payment subject to the conditions that the beneficiary concerned fulfils all eligibility conditions and the ANM has completed the laid down procedure. The ANM should keep cash advance of at least Rs.1500/- at any point of time with the ASHA for institutional delivery of beneficiaries already registered under JSY and replenish it as soon as possible.

> *Where Panchayati Raj Institutions (PRIs) exist and an elected body is in place, the State Governments/District society will be at liberty to keep the money with Panchayati Raj Institutions and empower Auxiliary Nurse Midwifes to incur expenditure jointly with the Gram Panchayat through a simple procedure to recoup the imprest periodically. All disbursements should be made immediately after delivery, if possible, in the hospital itself.*

(g) **Partnership with Private Sector**: Acknowledging that infrastructural facilities in the public sector are not adequate, States/Union Territories would devise mechanisms to recognize hospitals/nursing homes/ clinics from Private Sector for providing obstetric care services to the JSY beneficiaries. Once that is done, benefits proposed under Janani Suraksha Yojana would also be available to eligible women delivering in the accredited health institutions.

PAYMENT OF CASH

Payment of cash to the Beneficiary and ASHA will be done as follows:

To the expectant mother

In One Installment: All payments to be made in one installment including compensation amount for sterilization wherever applicable at the time of discharge from the hospital/health centre. It would be the responsibility of ANM/ ASHA to ensure disbursal in time.

To ASHA or an equivalent worker

In two installments: In the rural areas of for meeting transport cost, and a part of compensation money of the accredited worker should be paid in advance to arrange for the logistics, in fact, advance kept with ASHA should be utilized for this purpose,

The balance amount is to be treated as cash incentive to the accredited worker.

50% of this would be given as first installment after discharge of the JSY beneficiary from the health centre provided ASHA or an equivalent worker accompanied and stayed with the pregnant woman in the health centre for delivery the remaining 50% of the cash incentive would be given one month after delivery when BCG vaccine has been administered to the child and she has helped in post-natal care and registration of birth of the newborn.

ROLE OF REGISTERED ACCREDITED WORKER/ASHA

ASHA or an equivalent worker in coordination with the AWW/ANM would have the following role:

- To help the family plan for the delivery care services for the expectant mother, promoting institutional delivery and
- To assist in immunization of the new born
- To act as a propagator /motivator of family planning services.

The following set of simple actions including a time-line for each of the activities leading to sanctioning of benefits and postnatal care for each expectant mother. This is the key to efficient implementation of the scheme.

- Identify pregnant woman from BPL families as a beneficiary of the scheme,
- Report to the ANM and bring the women to the sub-centre/PHC for registration,

- Assist the woman to obtain BPL certification if BPL card is not available,
- Provide and / or help the women to receive at least three ANC,
- Counsel for institutional delivery and fix the place of delivery before 7th month of pregnancy, in close consultation with the ANM and the PHC and inform the beneficiary,
- Assist in receiving two TT injection,
- When the pregnant woman is in labour or faces complication, escort the women to the pre-determined health centre and stay with her till the delivery is complete and woman is discharged,
- Arrange to immunize the newborn till the age of 10 weeks,
- Register birth or death of the child or mother,
- Post natal visits within 7 days of child birth and track mother's health,
- Counsel for initiation of breastfeeding within one-hour of delivery and its continuance till 3-6 months.

Identifying BPL Beneficiaries /BPL Certification

a) Wherever BPL Cards have been issued under the targeted Public Distribution System and Antyodaya Anna Yojana, it should be the instrument of identification of the beneficiaries.
b) If BPL cards have not yet been issued, the State/UT governments / Municipalities will lay down a simple criterion for certification of BPL Status, through Panchayats or other mechanisms.
c) The ASHA or an equivalent health worker would facilitate in obtaining necessary certification, well ahead of time, so that the non-availability of card or inability to identify a BPL status does not become a hindrance for non- implementation of the scheme.
d) All deliveries in government run facilities – PHCs, CHCs, district hospitals, civil hospitals etc would be considered BPL families- they would not be required to show the BPL card.

Note1: Normally families living in urban slums, families working as rag pickers, pavement dwellers, vendors in village haat /bazaar etc would be eligible.

Note 2: The panchayat and the local bodies should be effectively involved in the certification process in a manner that genuine poor women are able to benefit from this scheme.

IMPLEMENTATION

- At the State level, the State Health Mission (SHM), chaired by the Chief Minister shall oversee implementation of the scheme. The State Mission Director shall nominate a State Nodal Officer for JSY and communicate the same to GOI at the earliest.

- Under the overall guidance of SHM an Implementation Committee (IC) for JSY shall also be constituted to steer the JSY initiative, under intimation to the Government of India. The Implementing

Committee will ensure that the State Action Plan under NRHM has a specific plan for JSY incorporating total requirement of fund based on the estimated number of beneficiaries for that financial year, district wise.

- The Committee under the guidance of SHM would:
  1. Ensure sanctioning of fund for each district based on the projection of the districts,
  2. Oversee overall monitoring and evaluation of the scheme and matters concerned therewith, and
  3. Make necessary reports to the Government of India.
  4. Ensure wide and continuous publicity to the benefits under the JSY and the procedures for claiming the benefit through posters, brochures, media, display of information at all Sub-centres, PHCs, CHCs and District Hospitals, Urban Health Centres, Health posts and those private hospitals, nursing homes/ clinics recognized for JSY.
  5. Ensure availability of application forms (JSY card)
  6. Display implementation guidelines in local languages at all health centres.
  7. Most importantly, devise promptly, notify and circulate in local languages:
     a. Appropriate simple procedure for verification of applications,
     b. Procedure for disbursement of recoupable imprest fund to ANM,
     c. Procedure to obtain BPL certification where BPL cards are not available or not issued by the state,
     d. Ensure availability of 24/7 delivery services in the PHC/CHC etc and devise a referral mechanism for pregnant women,
     e. Instruct the CHC/FRU to give priority services to the holder of "Referral Slip" issued by ANM/MO.

BOTTLENECKS:

This is a relatively new programme and it needs more time. It is still too early to assess it. However it represents a bold new approach and it is still actively open to improvement. For example three major bottlenecks that the NMBS faced was that a) girls below the age of 19 who had become pregnant were being excluded when they were most at risk for maternal deaths, b) women with more than three children were being excluded from the beneficiary category when they are at high risk for complications during child-birth and, c) insistence on BPL card was excluding a number of poor women from getting the assistance due for they had either not been issued cards or not brought it along to the health facility. All these three restrictions have been removed. Now any woman of any age and any order of pregnancy can receive assistance under this scheme. Also any woman irrespective of her family income status attending a public health facility for institutional delivery is eligible for the benefits of this scheme – which takes into account the simple fact that mostly it is poor women who are using public health facilities. For private sector facilities the production of a BPL card is still mandatory so as to make monitoring against misuse easier.

There are other bottle-necks which are being reported and may required action at local levels and at policy levels to address.

1. **Promptness of Payment** : Some states have used their flexibility to change guidelines especially as regards channels of payment. This has sometimes led to promptness of payment being violated. If there is an institutional delivery the entire payments can be completed then and there. But often many days are spent getting the incentive paid. The clause that the second installment would be paid after the child has got BCG done often becomes a tactic of delay, one amongst many, and since the ASHA cannot afford to come again and again to the place of institutional delivery she often just gives up. If the payment is to be in the village – placing the money with ANM would not lead to prompt payment where her visits are very infrequent and where the ANM is not resident at the sub-center. Most states have not given that much sums as advance to the ANM nor have streamlined alternative channels.

2. **Delinking transport payments and ASHA incentive**: Some states have made it clear that Rs 200 is reserved for the ASHA incentive and Rs 400 for transport for the pregnant woman and her escort. Where this is not clarified there is reluctance to pay all of Rs 600 to the ASHA and to the family, which confusion becomes a context for delaying or non payments. Also it puts some tension between family and ASHA as transport costs tend to be above Rs 600 and then giving even 200 to the ASHA as incentive is either denied or resented.

3. **Insisting on escort services**: While ASHA performing escort services is an example of laudable community service, the insistence on it as a condition for payment- robs it both of its character of voluntarism and becomes the excuse for denying incentive payments to most ASHAs. In the fitness of things it is the privilege and duty of the father of the child to escort – and perhaps of the mother of the pregnant woman – in our cultural context. The ASHA does not replace this role and if the accompanying relative is reasonably competent, the role of the ASHA as an escort is redundant. The payment of incentive should be delinked from physical provision of escort services. The rules do say that arranging for escort is enough – but rules in such situations tend to get interpreted against the interests of the poor. And how can the ASHA ever prove that the husband went because she persuaded him to go and not because his own wife asked him to accompany him? The need is therefore to insist on incentive payments to the ASHA from where the pregnant woman came irrespective of whether she escorted or whether she can establish she promoted it and give the transport fund directly to the family. The functionality of the ASHA would have to be established by other means.

4. **Recognising Importance of Maternity Benefits as a concept**: While it is true that promotion of institution delivery is a goal – in most places the availability of affordable services for the poor is still the critical limitation – and not the attitude of the poor – in availing of such services. Therefore equal importance needs to be given to reaching the assistance to poor women who deliver at

home also. And this Rs 500 can be used to promote skilled assistance at birth –even in the home setting.

We need to note that the concept of earlier payment was to promote better nutrition in the BPL pregnant woman – who by the very definition of BPL does not have adequate access to her calorie requirements. Of course there were also reasons to believe – though no definite studies- that this one time payment of Rs 500 did not make a significant change in her nutrition levels. Hence the decision to use it instead for assistance and the time of child birth when there are many cash needs, including higher nutritional requirements seemed reasonable. However the goal of nutrition supplementation for the BPL pregnant woman still remains an issue.

Under the current availability of schemes the provision of a nutrition supplementation under the ICDS scheme to pregnant women and to women in the first six months after child birth while she is lactating thus assumes much greater importance. The JSY scheme thus needs to synergize with a strengthened, reformed, universalized ICDS programme better and other systems for maternity entitlements/benefits to women working in the informal sector. Other state schemes for maternity assistance may also exist and should be utilized. For example, in the budget speech for 2006-07, a new scheme of maternity entitlements was announced in Tamil Nadu which is applicable to all poor pregnant women in the rural agricultural sector and allows Rs 6000 to be paid in six monthly installments payable for three months before childbirth and three months after childbirth.

5. **Accrediting Private Sector Partners for JSY:** There is a guideline to ensure that at least two private sector partners are recruited per block. This is being rapidly rolled out – but given the rising demand- not rapidly enough. The skills to draw up appropriate contracts, the systems needed to monitor the private sector partners, to ensure that costs are fixed, are all slow to follow and this could lead to serious problems later on. The immediate problem is that only Rs 1500 can be offered as remuneration for specialists for cesarean sections which is too low an amount – but without the systems in place there is no confidence in increasing this amount and making this a major route of provision of services.

6. **Emergency Obstetric Care services** are slow to develop and any large programme of increasing institutional delivery requires this. The approaches to rapid expansion of this capacity is discussed elsewhere.

DEMAND –SIDE FINANCING:

Most public expenditure on health in India has been limited to the public provision of health care services. The government is thus spending on being the provider of health services. This is known as supply side financing. In contrast in Janani Suraksha Yojana the funding is to the user of services- partially- and the

beneficiary is free to choose between private sector provider and public sector provider. This marks a small shift in policy in a very small area of service provision. Since in JSY the entire cost of the delivery is not being reimbursed to the service provider and there is no attempt to fix the cost of the service it amounts only to an aid for transport and other invisible costs. Still it is a beginning!

The main problems of demand side financing is that it requires very high levels of monitoring if the private sector is involved and it needs a regulatory system in place. Also if there is full utilization the costs are considerable. On the other hand if it is not extended to the private sector, a considerable part of the poor would not be able to benefit from it. This issue is only being mentioned here to reflect on this difference and its implications.

Similar programmes can be made for emergency neonatal care, for trauma care and for a number of other life saving situations and public health goals. These would be discussed in a later book.

Review Questions:

a. What are the objectives of the Janini Suraksha Yojana programme.
b. What were the bottlenecks that were recently removed and why?
c. What is the maximum amount that the mother can be given and what would the ASHA get – in urban and in rural contexts.
d. What are the current bottle-necks that the programme is reporting?

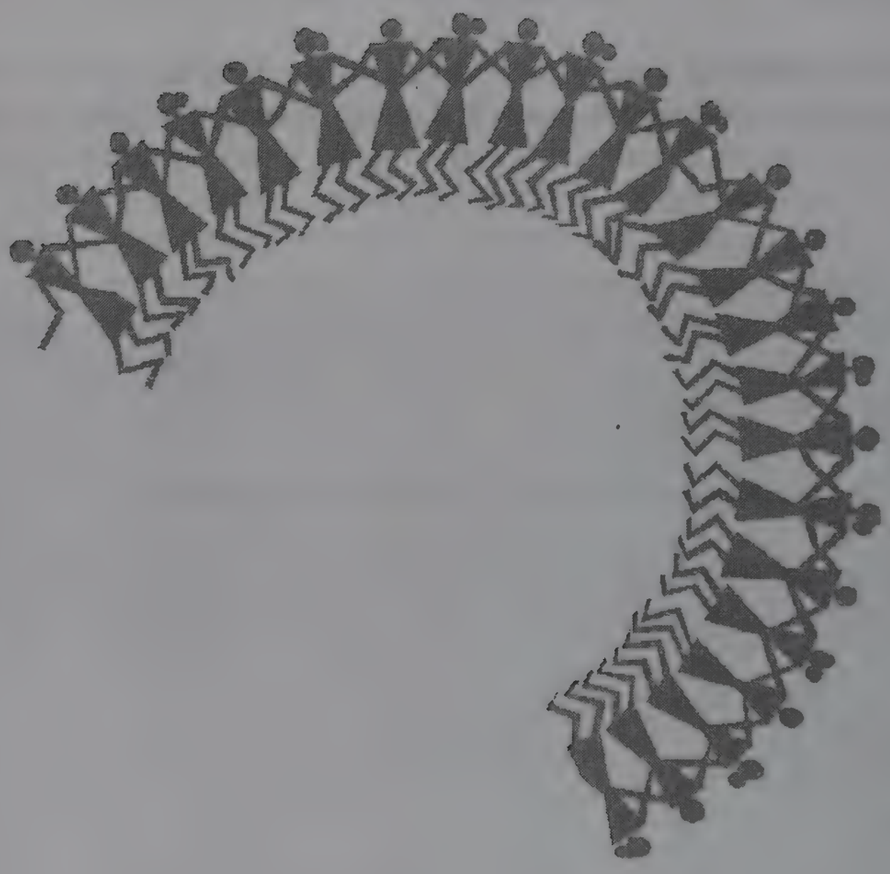
Application Questions:

1. What are the reasons for and limitations and cautions in using private partners for JSY? What must be done to maximize the benefits and minimize risks in such arrangements?
2. What other interventions need to be made to successfully provide maternity protection / benefits / entitlements to poor women?

Project Assignment:

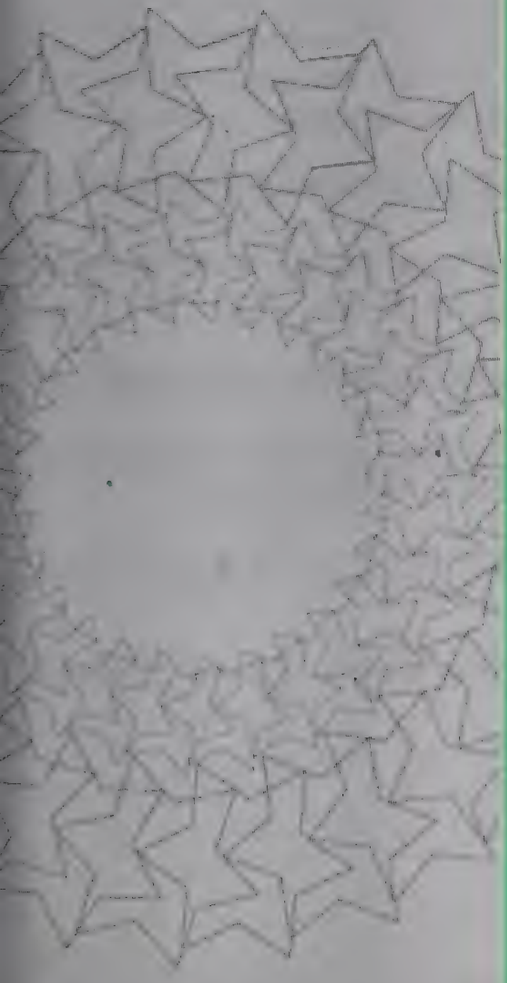
Meet 10 women in the community who have recently been through childbirth and who are BPL or went to government facility for child birth and note their experience in getting this assistance. Then in coordination with the other participants in this programme in your district who have carried out this assignment, draft two paragraphs for inclusion in the district plan, describing the bottle-necks and what you would, as a group, propose to overcome these. You could submit this to concerned authorities and note their response too and send it with the assignment.

NOTES



Lesson EIGHT

References, Technical Resources and Further Readings



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LESSON 2: ESTIMATING IMR

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LESSON 3: CONSTRAINTS IN IMPLEMENTING STRATEGIES FOR REDUCTIONS IN MATERNAL DEATHS

"Reduction of maternal mortality: a joint WHO/UNFPA/UNICEF/World Bank statement (www.who.int/reproductive-health/publications/reduction_of_maternal_mortality)

"Safe Motherhood Action Agenda: Priorities for the Next Decade (A summary report of the Safe Motherhood Technical Consultation held in Sri Lanka, October 1997) www.safemotherhood.org

LESSON 4: BEST PRACTICES

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State Health Resource Center Chhattisgarh: http://www.shsrc.org/indexsh.htm

LESSON 5: CONTEMPORARY DEBATES

'Report of the United Nations International Conference on Population and Development (ICPD) 5-13 September 1994 Cairo, Egypt' Website: www.iwhc.org

The Cairo Conference Website: http://www.iisd.ca/Cairo.html

LESSON 6: BEHAVIOUR CHANGE COMMUNICATION (BCC) STRATEGY FOR REDUCTION OF MATERNAL MORTALITY

Ministry of Health and Family Welfare, Government of India, *Guidelines of ASHA* (www.mohfw.nic.in)

LESSON 7: JANANI SURAKSHA YOJANA

Ministry of Health and Family Welfare, Government of India, *Guidelines of Janani Suraksha Yojana* (http://www.mohfw.nic.in/janani__suraksha__yojana.htm)

Action Alert on National Rural Health Mission, Jan Swasthya Abhiyan, 2005 (http://phm-india.org/campaigns/prhw/index.html)

Campaign to raise concern on maternal deaths in Madhya Pradesh (safemotherhood.blogspot.com/2006)

ANNEXURES

Sample Registration System Verbal Autopsy Form (Registrar General of India/CGHR, Prospective Study)

Further Readings and Technical Resources:

1. Publications And Documents By Who(Can Be Accessed From Www.who.int/reproductive-health/Publications/btn/index.html)

Making Pregnancy Safer: The Critical Role of the Skilled Attendant. A Joint Statement by WHO, ICM and FIGO

This book is about why there is a need to focus on skilled attendance at birth, what the types of skilled attendants are, and the core skills and abilities needed at various level of providers. (PDF 452 KB)

Pregnancy, Childbirth, Postpartum and Newborn Care - A Guide for Essential Practice

This book includes recommendations for skilled attendants working at the primary health care level and professionals. It provides a guide for the management of women during pregnancy, childbirth and postpartum, post abortion, and newborns during their first week of life. it discusses routine and emergency care, either at the facility or in the community including timely referral and initiating appropriate treatment before. **178 pages - PDF (1547 KB)** Priced document* CHF 40.00 / US $ 36.00

Beyond the Numbers - Reviewing Maternal Deaths and Complications to Make Pregnancy Safer

'Beyond The Numbers' presents ways of generating information on maternal deaths. The approaches described go beyond just counting deaths to developing an understanding of why they happened and how they can be averted. 'Beyond The Numbers' is directed at health professionals, health care planners and managers working in the area of maternal and newborn health who are striving to improve the quality of care provided. 2004 - 150 pages Full text (PDF file - 2,556 KB)Cover (PDF file 800 KB)

Managing Complications In Pregnancy and Childbirth: A Guide for Midwives and Doctors

A useful guide for Midwives working in Community Health Centres and District Hospitals. Printed version-The text contains Rapid Assessment by a symptom based approach in diagnosis of pregnancy related complications. Medical management of complications and surgical procedures are also detailed. Full text PDF (10,337 KB)

The Clinical Use of Blood In Medicine Obstetrics Paediatrics Surgery and Anaesthesia Trauma and Burns –

The module is designed for prescribers of blood at all levels of the health system, particularly clinicians and senior paramedical staff at first referral level (district hospitals and Community Health Centres). These include clinical specialists, blood transfusion specialists, district medical officers, general practitioners working in isolation, postgraduate medical officers (registrars), junior doctors , medical students and senior paramedical staff, such as nurse anaesthetists. It will also be a useful resource for trainers in medical schools, university teaching hospitals, schools of nursing and continuing medical education programmes. PDF (1587 KB) 337 pages

Health Workers' Manual on Counselling for Maternal and Child Health, 2nd Edition

Reference manual for use whenever health workers have an opportunity to give pregnant women and the mothers of young children advice about ways to stay healthy and respond to common risks. 1998, 108 pages; ISBN 9290611391, Price for developing countries: 5.30 US$/ 7.00

Care of Mother and Baby at the Health Centre: A Practical Guide of a Technical Working Group

A practical guide;54 pages -1997Full text (PDF - 228 KB) The purpose of this report is to define the functions, tasks and skills needed for the comprehensive care of mother and baby which can be provided at the health centre and in the community, covering the preconceptual, prenatal, intranatal and postnatal periods. It examines the role of the health centre in training; supervision and continuing logistic support for community-based care, whether provided through traditional birth attendants or community health workers. It also looks at their role as a crucial link to the first referral centre. The document presents a series of recommendations designed to assist health planners and programme managers in efforts to improve access to health and to decentralize maternal and newborn health care.

Care In Normal Birth - A Practical Guide

Report of a technical working group;1997 - 54 pages Full text (PDF - 182 KB)Establishes universal guidelines for the routine care of women during uncomplicated labour and childbirth. Recommendations for routine care are based on a critical review of what considerable research has to say about the effectiveness and safety of 59 common procedures and practices.

Preventing Prolonged Labour: Practical Guides:

The Partograph - Part I Principles And Strategy

The Partograph - Part II User's Manual

The Partograph - Part III Facilitator's Guide

The Partograph - Part IV Guidelines For Operational Research

Surgical Care The District Hospital: Obstetrics, Gynaecology, Orthopaedics, And Traumatology:2003 - 512 pages

Many patients who present to district (first-referral) level hospitals require surgical treatment for trauma, obstetric, abdominal or orthopaedic emergencies. Often surgery cannot be safely postponed to allow their transfer to a secondary or tertiary-level hospital, but many district hospitals/block hospitals in developing countries have no specialist surgical teams and are staffed by medical, nursing and paramedical personnel who perform a wide range of surgical procedures, often with inadequate training. The quality of surgical and acute care is often further constrained by poor facilities, inadequate low-technology apparatus and limited supplies of drugs, materials and other essentials. WHO/BCT has identified education and training as a particular priority, especially for non-specialist practitioners who practise surgery and anaesthesia. It has therefore developed Surgical Care at the District Hospital as a practical resource for individual practitioners and for use in undergraduate and postgraduate programmes, in-service training and continuing medical education programmes.

Postpartum Care Of The Mother And Newborn: A Practical Guide

This document reports the outcomes of a technical consultation on the full range of issues relevant to the postpartum period for the mother and the newborn. The report takes a comprehensive view of maternal and newborn needs at a time which is decisive for the life and health both of the mother and her newborn. Taking women's own perceptions of their own needs during this period as its point of departure, the text examines the major maternal and neonatal health challenges, nutrition and breastfeeding, birth spacing, immunization and HIV/AIDS before concluding with a discussion of the crucial elements of care and service provision in the postpartum period. The text ends with a series of recommendations for this critical but under-researched and under-served period of the life of the woman and her newborn, together with a classification of common practices in the postpartum into four categories: those which are useful, those which are harmful, those for which insufficient evidence exists and those which are frequently used inappropriately. 2002 - 34 pages;81 pages – 1998;Full text (PDF, 283 KB)

Safe Motherhood Needs Assessment (revised version, 2002)

The specific objective of the Safe Motherhood Needs Assessment is to provide managers, policy-makers, and other interested parties at the national and district level with the necessary tools to undertake **a rapid survey**: (1) to describe the availability, use and quality of antenatal, delivery and postpartum care provided to women and newborn babies at all levels within the health care system; and (2) to identify gaps in the provision of this care. Particular emphasis is placed on assessing the skills and ability of staff to provide the services identified in the Mother-Baby Package, and on the availability of appropriate drugs, supplies, equipment, facilities and transport.

Strengthening Midwifery Within Safe Motherhood

Report of the workshop was to strengthen midwives capacity to take leadership roles in the development and implementation of their countries National Safe Motherhood Action Plans.1997 - 67 pages,Full text (PDF 250 KB)

2. Averting Maternal Death and Disability Program (AMDD), Mailman School of Public Health, Columbia University (Available in CDs from PHRN)

Reference Manuals	Courseware
1. Managing Complications In Pregnancy And Child birth 2. Infection Prevention: A Reference Booklet For Health Care Providers 3. Infection Prevention Practices In Obstetric Care 4. The Design And Evaluation Of Maternal Mortality Programmes 5. Care Of The Newborn, Published	1. Distant Learning System on Population Issues : Course 6 – Reducing Maternal Deaths: Selecting Priorities, Tracking Progress 2. Emergency Obstetric Care for Doctors and Midwives 3. Anaesthesia for Emergency Obstetric Care for Doctors and Midwives

Tools

1. Guidelines To Monitoring And The Availability And Use Of Obstetric Services
2. AMDD Workbook: Using the UN Process Indicators of Emergency Obstetric Services, Questions and Answers
3. Quality Improvement for Emergency Obstetric Care: Leadership Manual
4. Quality Improvement for Emergency Obstetric Care: Tool Book
5. Improving Emergency Obstetric Care Through Criterion-Based Audit
6. Emergency Obstetric Care Assessment Tools

3. SHRC publications and resources:

1. Interactive Dai Training Module- on CD format.
2. Dai Training Booklet
3. Dai's Communication Booklet
4. Women's Health Book for Mitanins;
5. Skilled Birth Attendance Training Manual for ANMs(in Hindi_ translation of GOI publication)

Note: To get any of the above material please write to us at our address or email. We would give you a cost estimate – equivalent to cost of making a copy and postage with a small 10% mark up for operational costs. Most WHO material is available at the WHO website and can be downloaded from there.

Note : We have indicated above how all the above books can be sourced. But if course participants have a problem they could approach course PHRN programme coordinators who would arrange for them to have a Xerox copy or on CD format – at costs.

WEBSITES: VARIOUS RESOURCES ARE AVAILABLE AT THE FOLLOWING WEBSITES

www.safemotherhood.org

www.who.int.reproductivehealth/publications

www.amdd.hs.columbia.edu

www.jhiepgo.org

www.cedpa.org

www.unfpa.org

www.engenderhealth.org

www.unicef.org

www.prodindia.com

www.reproline.jhu.edu

www.infoforhealth.org

www.whiteribbonalliance.org

www.familycareintl.org

www.fhi.org

www.aed.org

www.rhrgateway.org

www.comminit.com

www.reproductiverights.org

www.infoforhealth.org

Annexure 1

SRS - Verbal Autopsy Form

RGI/CGHR PROSPECTIVE STUDY
SRS - VERBAL AUTOPSY FORM
Form 10D : Maternal death (females aged 15 to 49 years)

CONFIDENTIAL

SRS unit number | **Copy this number on to Form 10C** 5

Year : 20 | **1st HYS** | **2nd HYS**

Name of head of the household | **Identification code of the head**

Full name of deceased | **Identification code of the deceased**

1A. Was she pregnant?
1.Yes 2. No 9. Unknown

1B. If yes, how many months?

If woman died within 42 days of delivery/abortion

2A. Did she receive antenatal care during the pregnancy?
1.Yes 2. No 9. Unknown

2B. How many times did she receive antenatal care during the pregnancy?

3. How many days before death did she deliver/abort?

4. Where was the delivery/abortion?
1. Home
2. Health facility
3. Other
9. Unknown

5. Who attended the delivery?
1. Trained traditional birth attendant
2. Untrained traditional birth attendant
3. Midwife/Nurse
4. Allopathic Doctor
5. Ayurvedic/Homeopathic/ Unani Doctor
6. None
7. Other
9. Unknown

If the woman had abortion, skip to Q18

6. Did she have a caesarean delivery?
1.Yes 2. No 9. Unknown

7. Did she have too much bleeding at the beginning of labour pains?
1.Yes 2. No 9. Unknown

8. Did she have too much bleeding during labour (before delivering the baby)?
1.Yes 2. No 9. Unknown

9. Did she have too much bleeding after delivering the baby?
1.Yes 2. No 9. Unknown

10. Did she have prolonged labour >12 hrs?
1.Yes 2. No 9. Unknown

11. Did she have difficulty in delivering the baby?
1.Yes 2. No 9. Unknown

12. Did she have a forceps or vacuum delivery?
1.Yes 2. No 9. Unknown

13. Did she have difficulty in delivering the placenta?
1.Yes 2. No 9. Unknown

14. Did she have fits and loss of consciousness?
1.Yes 2. No 9. Unknown

15. Did she have fits during pregnancy/during labour or after labour?
1.Yes 2. No 9. Unknown

16. Did she have fever?
1.Yes 2. No 9. Unknown

17. Did she have foul smelling discharge?
1.Yes 2. No 9. Unknown

Section 3: Written narrative in local language **18. Narrative language code**

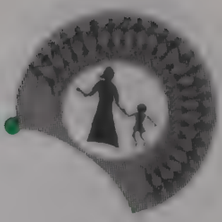
Please describe the symptoms in order of appearance, doctor consulted or hospitalization, history of similar episodes, enter the results from reports of the investigations if available.

Respondent's cooperation: 1. Good 2. Medium 3. Poor

Interviewer name Code

Date: D D / M M / Y Y

Signature/Impresion	
Respondent	Respondent
Interviewer	Interviewer



Annexure 2

Maternal Death Reviews - Form B

Community Interview Record to be filled by community health worker/ NGO member
The interviewer should follow the woman backwards down 'the long road to maternal death' starting with details of events immediately surrounding the time of death. The process of gathering the information is likely to be very upsetting to the relatives of the deceased woman. The approach of the data collector must be acutely sensitive to this. An introduction is required which tells the interviewee(s) the purpose of the interview, recognises that it is difficult for them and that their cooperation will help other women not to suffer the same fate.

The checklist is to be used as a memory prompt; the sample questions given here are illustrative and should be adapted for local use.

Name of woman .....

Pg.1. Checklist – about the respondent	Details
Verbatim report 'What relation were you to (name)? Can you tell me what happened before (name) died and what you think the cause of her death was?'	
Respondent'sknowledge Were you present with (name) when she died?If no, 'how long before (name) death did you see her?''Who told you about her death?''Was this person with (name) when she died?''About how long after her death, did you hear about it?'	

Pg.2. Checklist – (at the facility)	Details
Treatment at the facility (skip page if death was at home and go to pg 4) 1. When did (name) die? Date and time? 2. If referred alive describe when and transport arrangements made and cost to pt of such arrangements – self made or provided by facility? 3. Who all had stayed in hospital with (name) – for how many days? 4. What treatment did (name) get at the facility (if present) or, what explanation of treatment was given to you by the staff at the facility (if any)? 5. Was surgery done? 6. How long did surgery take? 7. Was blood given? 8. Was other intravenous fluids given? 9. Were injections or drugs used – names if possible? 10. When was surgery done? Was there any delay due to non availability of drugs or staff or doctor or blood etc.? 11. What were the symptoms present before death? (see list on page n) 12. What were the symptoms present on admission? (see list on page n) 13. What was the time between reaching the hospital and being seen by a nurse? By a doctor? 14. When did she reach the facility – date and time.	

Note : If patient has been seen in another facility another page 2 should be inserted and this should be filled separately for each facility seen.

Pg.3. Checklist – At community for transport	Details
Action taken for transport: 1. What transport(s) brought (name) to the facility? Mention private or public. 2. Who all came with her? 3. What was expenditure? 4. What was travel time from the point of departure to the arrival at facility? 5. What was distance? 6. When did family decide to transport (name) to the facility? 7. From time of deciding to getting the transport to the door step took how long? How was it organised? What were causes for delay-if any? 8. What was the time to make cash arrangements? 9. How were the cash arrangements made? 10. What were the reasons for deciding to shift the patient? What were the symptoms at that time? Who all made the decision?	

Pg.4. Checklist – At home after onset of labour	Details
1. Why was there a delay in seeking treatment? (ask this question even if patient was never sought to be shifted to the facility). 2. Why no treatment was sought may be a sensitive question. A) It may be that the cause of death was sudden and unpredictable (e.g. eclamptic fit in second stage labour); B) that the attendants did not notice anything was wrong (see next question); C) or that there was no money (or money offered) for transport or D) another 'social' reason which may be difficult to elicit. 3. When did labour pains start? 4. Who was available to assist at birth? Dai, relative, neighbour, ANM, nurse, doctor, RMP, etc. 5. What had been the plan made earlier? **Warning signs** Did something happen to make you realise that something was going wrong? 6. When was that? 7. What was that? 8. Did anyone recommend that (name) be referred? 9. **Symptoms**: 'Close to time of death if death occurred in the house, did (name) have any of the following problems:' - Loss of consciousness - convulsions/fits - bleeding from the vagina (flooding with blood) - long labour (longer than 12 hours) - high fever - yellow skin or eyes - severe abdominal pain - severe chest pain - extremely short of breath - coughing up blood	

Pg.5. Checklist – Before onset of labour	Details
General health during pregnancy 1. 'Before (name) was pregnant for the last time, was she generally well?' 2. Was she underweight? 3. Did she complain of breathlessness and fatigue? 4. Did she have chronic cough? 5. Did she have any known disease esp. of heart, etc. **Antenatal care** 6. 'Did (name) ever go for an antenatal care visit during her last pregnancy?' 7. If yes, 'Where did she usually go?' 8. 'Whom did she usually see for antenatal care?' 9. 'How many times did she go during this last pregnancy for antenatal care?' 10. Were there any health problems (name) had during this pregnancy? 11. Was there any problems noticed during antenatal care? 12. Was blood pressure taken? 13. Was urine examined? 14. Was blood examined? 15. Was weight taken? 16. Has she been adequately immunised with TT. 17. Had she got/taken 90 tablets of IFA. 18. Where was delivery planned to be held and who was to assist? **History of Prior Pregnancy**: 19. Number of past pregnancies. 20. Number of abortions. 21. Number of pregnancies that had complication. 22. Had surgery been done for delivering child earlier. 23. When was the last previous pregnancy - how many years before.	

Conclusion	**Conclusion**
Type of delay (1 or more): Phase I in deciding to seek modern medical care. Phase II in reaching the facility Phase III in receiving adequate treatment at the facility.	

Summary of avoidable factors	**Importance of factor (✓)**		**Type of factor (✓)**					
	Definitely would have avoided death	Possibly would have avoided death	Staff lapse over-sight, misguided or wrong action	Equipment, supplies gaps	Inadequacy of care at facility	Facility level delay Including delay at intermediate facility. Phase III	Factor in the community leading to delay in reaching facility. Phase II	Family factors leading to delay in seeking care. Phase I
1								
2								
3								
4								
5								

Name of data collector : .....

Date of completion : .....

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Public Health Resource Network

A Programme of Sharing Technical Resources to Strengthen District Health Programmes

The PHRN is a civil society initiative to support district level public health practitioners.The core of the programme is a 12-18 month distance learning programme. This course is being organised as a partnership programme of a number of Government and Non-Governmental Organisations and resource centres.

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